

# REPORT ON THE TURTON COLLECTION OF SOUTH AFRICAN MARINE MOLLUSKS, WITH ADDITIONAL NOTES ON OTHER SOUTH AFRICAN SHELLS CONTAINED IN THE UNITED STATES NATIONAL MUSEUM.

---

By PAUL BARTSCH,

*Curator, Division of Marine Invertebrates, United States National Museum.*

---

## INTRODUCTION.

Some years ago Lieut. Col. W. H. Turton, D. S. O., late Royal Engineers, presented a collection of marine mollusks from Port Alfred to the United States National Museum with a request for identification and report. The many duties of the staff of the Division of Mollusks and the absence of critically identified material from South Africa for comparison, rendered progress upon this report rather slow. About the time that the first sending was worked up, a second one arrived, and finally a third, each requiring a revision of the previous report. While this does not show in the text of the present paper, it will explain why the figures on the plates which accompany this report are not always in accord, so far as sequence is concerned, with the systematic arrangement of the text. It also explains why the type of illustrations used is not uniform, the line drawings being part of the report as first prepared, while the photographic method of illustration was adopted later.

Col. Turton informs me that he made these collections on four visits to Port Alfred, 1902, 1904, 1905, and 1911, staying there altogether 16 months. "The shells," he says further, "were all found within 10 miles of the village and were secured on the beach, without either dredging or diving." Judging from the fact that in many cases a single specimen only was secured, it seems quite possible that if equally careful collecting were continued in this place, especially if supplemented by dredging, many additions might be made to the already rather remarkable list.

In looking over the collection as a whole one is struck by the prevalence of red coloration, which seems explained by the fact that the red algae form the dominant element in the marine vegetation of the region.

It was deemed advisable to render this report more useful to students by considering with it all the mollusks contained in the United States National Museum from the *South African faunal area*, and while this is not a large series, there are nevertheless among it some very important shells, namely, Gould's "types," obtained by William Stimpson, the zoologist of the North Pacific exploring expedition, at Cape Good Hope, Simons Bay, and False Bay, September 12 to November 9, 1853. These types are now figured for the first time, and a little fuller diagnosis is given of them.

At the end of this paper I have given what I believe to be a list of all the species that have been reported from South Africa of which there are in the United States National Museum no specimens from that region. In this list the type-locality from which the specimens were originally described is cited. It is hoped that this list may serve as a stimulus to future collecting, and that it may also stimulate those authors who have wrongly identified material to review their decisions, which will doubtless result in the expunging of many erroneous records from a list which appears heavily burdened by them.

This report would be incomplete did I not acknowledge my great obligations to Dr. William H. Dall, honorary curator of the Division of Mollusks, for much assistance in its preparation, particularly in the treatment of the part dealing with the bivalves.

I wish also to state that the line drawings of plates 1-6 were made by Evelyn Grosbeck Mitchell, while the photographs were made by Mr. T. W. Smillie, of the National Museum, and retouched by Mrs. E. Bennett Decker. The collection numbers in parentheses are those given by Colonel Turton.

#### SYSTEMATIC LIST.

### Phylum MOLLUSCA.

#### Class CEPHALOPODA.

#### Order DIBRANCHIATA.

#### Family ARGONAUTIDAE.

#### Genus ARGONAUTA Linnaeus.

#### ARGONAUTA ARGO Linnaeus.

Cat. No. 227802, U.S.N.M., one specimen from Port Alfred (Coll. No. 897).



## Family SPIRULIDAE.

## Genus SPIRULA Lamarck.

## SPIRULA PERONII Lamarck.

Cat. No. 186647, U.S.N.M., one specimen from Port Alfred (Coll. No. 1).

## Class GASTROPODA.

## Order PTEROPODA.

## Family CAVOLINIDAE.

## Genus CAVOLINA Abildgaard.

## CAVOLINA LONGIROSTRIS Lesueur.

Cat. No. 227808, U.S.N.M., two specimens from Port Alfred (Coll. No. 903).

## CAVOLINA GLOBULOSA Rang.

Cat. No. 250588, U.S.N.M., contains one specimen of this species from Port Alfred (Coll. No. 1461).

## Genus STYLIOLA (Lesueur) Gray.

## STYLIOLA AFRICANA, new species.

Plate 34, fig. 4.

Shell similar to *Styliola virgula* Rang, but in every way stouter and considerably less curved.

The type and another specimen, Cat. No. 249794, U.S.N.M., come from Port Alfred (Coll. No. 1066). The type measures: Length, 4 mm.; diameter, 1.2 mm.

## Order TECTIBRANCHIATA.

## Family ACTEONIDAE.

## Genus ACTEON Montfort.

## ACTEON ALBUS Sowerby.

Cat. No. 186658, U.S.N.M., one specimen from Port Alfred (Coll. No. 13).

## Genus BULLINA Ferussac.

## BULLINA SCABRA Gmelin.

Two specimens, Cat. Nos. 249798 and 250582, both from Port Alfred, are in the collection of the United States National Museum (Coll. Nos. 1070 and 1455).

## Family TORNATINIDAE.

## Genus ACTEOCINA Gray.

## ACTEOCINA SMITHI, new species.

Plate 1, fig. 9.

Shell cylindric, semitransparent. Nuclear whorls small, well rounded, smooth, forming a planorboid spire whose axis is at right angles to that of the succeeding turns. The nucleus surmounts the fairly well elevated spire formed by the succeeding turns. Post-nuclear whorls, five, cylindric, slightly contracted in the middle; gently rounded anteriorly and more abruptly at the summit. The parietal wall is covered by a thick callus which extends posteriorly on the preceding whorl, a little higher than the outer wall of the last whorl, with which it is united by a U-shaped bridge, that joins the outer wall so as to form an exceedingly acute ridge; a deep channel therefore separates the outer from the parietal summit on the last whorl.

Entire surface marked by very regularly spaced, fine, raised axial threads, that are separated by spaces about as wide as the threads. These threads curve strongly posteriorly in the middle. In addition to the axial sculpture, the basal half of the shell is marked by fine spiral striations which are best developed near the base.

Aperture reversed comma-shaped, posterior half of about equal width, anterior half expanding gradually from the middle of the wall; outer lip thin, curved; parietal wall covered by a thick callus which is continuous with and reflected over the columella. The columella joins the outer lip in an even curve.

There are two specimens, cotypes, in the collection, from Port Alfred, Cat. No. 186657, U.S.N.M. (Coll. No. 12). One, an adult somewhat rubbed, the other a young perfect individual. The first measures: Length, 4.5 mm.; diameter, 2.0 mm. The latter: Length, 3.5 mm.; diameter, 1.7 mm.

These specimens were sent to us by Col. Turton under the name of *Tornatina voluta* Quoy and Gaimard. It is possible that this is the species that has been reported from Port Alfred under that name. It is not *T. voluta* Quoy and Gaimard. That species, which was originally described from Guam,<sup>1</sup> is much larger, length, 10.5 mm.; diameter, 4.2 mm., and is said to be smooth.

## ACTEOCINA, species?

Cat. No. 250577, U.S.N.M., contains a young specimen belonging to this genus, from Port Alfred (Coll. No. 1450).

## Genus RETUSA Brown.

## RETUSA TRUNCATULA Bruguiere.

Cat. No. 186659, U.S.N.M., six specimens from Port Alfred (Coll. No. 14).

<sup>1</sup> Voyage de l' *Astrolabe*, p. 359, pl. 26, figs. 33-35, 1832.

## Genus VOLVULA A. Adams.

## VOLVULA, species?

Cat. No. 250583, U.S.N.M., contains one specimen of this genus, from Port Alfred, which unfortunately has lost part of the lip, which renders positive identification impossible. (Coll. No. 1456).

## Family SCAPHANDRIDAE.

## Genus CYLICHNA Loven.

## CYLICHNA AFRICANA, new species.

Plate 1, fig. 8.

Shell, white, subcylindric, spire deeply sunken, giving the apex a perforate appearance. The body whorl is somewhat contracted in the middle, rendering the outline of the sides concave. The entire surface is marked by slender, subequally spaced axial riblets, which give it a finely fluted appearance. Aperture long, narrow posteriorly, roundly expanded anteriorly; outer lip parallel to the parietal wall except at the expanded basal fourth of the shell. The outer lip projects considerably above the summit of each preceding turn, marking the highest elevation of each turn. The parietal wall of the last turn is covered with a thin callus, which is continued posteriorly to form the parietal wall of that part of the aperture which projects above the summit of the preceding turn. The outside of the parietal wall within the perforated top, is marked by the continuations of the riblets. Columella with an inconspicuous oblique twist near the middle, short, slender, finely curved, connected at the base with the parietal callus.

The type and three specimens, Cat. No. 187147, U.S.N.M., were collected at Port Alfred (Coll. No. 694). The type measures: Length, 3.4 mm.; diameter, 1.4 mm.

This species resembles *Cylichna hoernesii* Weinkauff from the Mediterranean. It is, however, a little less contracted posteriorly, has the outer lip extending much higher posteriorly, and lacks the fine striations of the spire as well as the strongly incised spiral lines of the base.

## CYLICHNA TUBULOSA Gould.

Plate 3, fig. 5.

*Cylichna tubulosa* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 40, 1859.

Shell cylindric, a very little wider anteriorly than posteriorly, white or creamy yellow. Spire submerged and covered; posterior end slightly concave, the highest portion being in line with the backward continuation of the outer lip. Left outline of the body whorl almost straight, curving gently toward either end. Inner lip quite evenly

curved. Outer lip thin, corresponding in curvature to the left outline of the body whorl. Surface marked by fine incremental lines and very fine, closely and evenly spaced, wavy, spiral striations. Aperture narrow, scarcely at all widened posteriorly, and very slightly so anteriorly. Parietal callus forming a thick rounded fold anteriorly.

Gould's type, Cat. No. 164, U.S.N.M., was collected by William Stimpson, on the North Pacific Exploring Expedition at Simons Bay. It measures: Length, 8 mm.; diameter, 2.6 mm. Cat. No. 249801, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1073).

### Family BULLARIIDÆ.

#### Genus BULLARIA Rafinesque.

##### BULLARIA AMPULLA Linnaeus.

Cat. No. 43129, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 186654, U.S.N.M., one from Port Alfred (Coll. No. 8).

##### BULLARIA, species?

Cat. No. 249797, U.S.N.M., three shells from Port Alfred, too immature to make identification positive (Coll. No. 1069).

### Family AKERATIDÆ.

#### Genus HAMINEA Leach.

##### HAMINEA ALFREDENSIS, new species.

Plate 1, fig. 5.

Shell irregularly pear-shaped, thin and translucent, light greenish yellow. The anterior portion of the outer lip projects considerably above the spire and stands off quite a distance from the parietal wall posteriorly, and very much anteriorly where it becomes quite patulous. The shell has a somewhat pinched appearance at the middle of the anterior half, which renders that portion flattened or even slightly concave. Base well rounded. Aperture very large; columella very strongly curved, reenforced at the edge by a narrow, reflected callus which expands and spreads over the interior of the lip at its anterior extremity; parietal wall covered by a callus. Entire surface marked by fine incremental lines and exceedingly fine, closely spaced spiral striations.

The type measures: Length, 12.4 mm.; diameter, 10 mm. It and another specimen come from Port Alfred, they are entered as Cat. No. 186656, U.S.N.M. (Coll. No. 10).

The present form differs from *natalensis* Krauss in having the posterior half of the spire flattened instead of evenly rounded, which gives *alfredensis* a pear-shaped outline while *natalensis* is oval.

Three additional lots from the same locality are in the United States National Museum. Cat. No. 227803, 10 specimens from Port Alfred (Coll. No. 898). Cat. No. 227806, three young individuals (Coll. No. 901). Cat. No. 250581, a very young individual (Coll. No. 1454).

### Family RINGICULIDAE.

#### Genus RINGICULA Deshayes.

##### RINGICULA TURTONI, new species.

Plate 1, fig. 4.

Shell subovate, polished, white. The nucleus consists of a single turn, which has the same outline as the succeeding whorls but lacks their sculpture, being smooth and shining. Post-nuclear turns greatly inflated, separated by strongly marked sutures and ornamented by deeply incised spiral grooves, of which four appear on the spire of each whorl in the type. In addition to these spiral grooves, the whorls are marked at irregular intervals by moderately strong lines of growth, between which there are many microscopic, axial, wavy lines. Periphery and base of the last whorl well rounded, marked by the same vertical sculpture as the spire and at least three spiral grooves, the anterior half being covered by a thick callus. Aperture auriculate, strongly channeled anteriorly; outer lip very much thickened, provided with a low denticle on the middle of the inner edge; columella very stout, covered by a heavy callus, which is reflected over the basal part of the shell, armed with two equally strong, oblique folds, the anterior of which is at the anterior edge and the other about halfway between this and the insertion of the columella; parietal wall covered with a very strong callus, which reaches posteriorly over half of the spire of the last turn and forms a strong elongated denticle which apposes the denticle of the outer lip.

The type has six whorls and measures: Length, 4.7 mm.; diameter, 3 mm.

The two additional specimens have three and five spiral grooves on the spire and four and six, respectively, on the base. They were collected at Port Alfred, Cape Colony, and form Cat. No. 187050, U.S.N.M. (Coll. No. 588). Another specimen from the same locality is listed as Cat. No. 250586 U.S.N.M. (Coll. No. 1459).

The nearest relative to this species appears to be *Ringicula ciliaris* Gould, the type of which, Cat. No. 1692, U.S.N.M., was collected by William Stimpson at Hakodadi, Japan. This, however, is a much larger species. The type, which has six whorls, measures: Length, 5.3 mm.; diameter, 3.6 mm.

##### RINGICULA AFRICANA, new species.

Plate 33, fig. 4.

Shell ovate, milk white; spire decidedly elevated. Whorls strongly rounded and feebly shouldered at the summit; the first and second



smooth, the third with two incised spiral lines, of which one is on the middle of the space between the sutures, and the second halfway between this and the summit of the succeeding turn. On the fourth whorl the first incised spiral line falls at the posterior extremity of the anterior fourth, while the other is halfway between it and the summit of the penultimate whorl. The last whorl is free from spiral sculpture. Aperture very much calloused; outer lip very thick, with a tooth a little posterior to the middle; parietal wall covered with very thick callous, which assumes the shape of a very broad fold; columella also heavily calloused, provided with two strong, lamellar, oblique folds, of which the first marks the anterior termination of the columella, while the second is halfway between this and the parietal callus.

The unique type, Cat. No. 250404, U.S.N.M., comes from Port Alfred (Coll. No. 1277). It has six whorls and measures: Length, 5.2 mm.; diameter, 3 mm.

### Family HYDATINIDAE.

#### Genus HYDATINA Schumacher.

##### HYDATINA PHYSIS Linnaeus.

Cat. No. 186655, U.S.N.M., one specimen from Port Alfred (Coll. No. 9).

#### Genus CYLINDROBULLA Fischer.

##### CYLINDROBULLA TURTONI, new species.

Plate 38, fig. 2.

Shell subcylindrical, very thin, entire surface marked by many irregular crack-like lines; very loosely coiled, with a strong sinus extending over a little more than half a whorl at the summit of the last turn. Apex depressed. Summit of the last whorl marked by a decided shoulder, which shows very slender axial riblets. Aperture very narrow, except at the somewhat truncated basal end, where it appears almost circular.

Two specimens of this species are in the collection of the United States National Museum, both from Port Alfred. The type, Cat. No. 227821, measures: Length, 8 mm.; diameter, 4.5 mm. (Coll. No. 902a); the other specimen is Cat. No. 249790 (Coll. No. 1062).

#### Genus VOLVATELLA Pease.

##### VOLVATELLA LAGUNCULA Sowerby.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 227807, one specimen (Coll. No. 902). Cat. No. 249791, one specimen (Coll. No. 1063). Cat. No. 250580, one specimen (Coll. No. 1453).



## Family APLYSIIDAE.

## Genus TETHYS Linnaeus.

## TETHYS MACULATA Rang.

Cat. No. 187145, U.S.N.M., two specimens from Port Alfred (Coll. No. 691).

## TETHYS CONCAVA Sowerby.

Cat. No. 187146, U.S.N.M., one specimen from Port Alfred (Coll. No. 692).

Cat. No. 249796, U.S.N.M., one specimen from the same locality (Coll. No. 1068).

## TETHYS, species?

Cat. No. 249792, U.S.N.M., contains two shells of a *Tethys*, which I am unable to identify, from Port Alfred (Coll. No. 1064).

## Family PHILINIDAE.

## Genus PHILINE Ascanius.

## PHILINE SCHROETERI Philippi.

Cat. No. 180, U.S.N.M., three specimens collected by William Stimpson, on the North Pacific Exploring Expedition at Simons Bay.

## PHILINE CAPENSIS Bergh.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred, as follows:

Cat. No. 227805, five specimens (Coll. No. 900). Cat. No. 249799, three specimens (Coll. No. 1071). Cat. No. 249800, three specimens (Coll. No. 1072).

## Family OXYNOËIDAE.

## Genus OXYNOË Rafinesque.

## OXYNOË NATALENSIS Smith.

Four lots of this species are in the collection of the United States National Museum, all from Port Alfred, as follows:

Cat. No. 187144, two specimens (Coll. No. 690). Cat. No. 227804, two specimens (Coll. No. 899). Cat. No. 250578, two young specimens (Coll. No. 1451). Cat. No. 250579, one specimen (Coll. No. 1452).

Shells of five additional species of Opisthobranchs are in the collection of the United States National Museum, from Port Alfred. We are unable to identify these from the shells alone. They are: Cat. No. 250584, two shells (Coll. No. 1457). Cat. No. 250587, one specimen (Coll. No. 1460). Cat. No. 250597, one specimen (Coll. No. 1470). Cat. No. 250585, one specimen (Coll. No. 1458). Cat. No. 250598, two specimens (Coll. No. 1471).

## Order PULMONATA.

## Family AURICULIDAE.

Genus MELAMPUS Montfort.

MELAMPUS ACINOIDES Morelet.

Cat. No. 186648, U.S.N.M., two specimens from Port Alfred (Coll. No. 2).

MELAMPUS, species?

Cat. No. 250594, U.S.N.M., contains a worn specimen of a *Melampus* larger than the above species, from Port Alfred, which I am unable to identify (Coll. No. 1467).

Genus MICROTRALIA Dall.

MICROTRALIA, species?

Cat. No. 250595, U.S.N.M., one young specimen from Port Alfred (Coll. No. 1468).

## Family SIPHONARIIDAE.

Genus SIPHONARIA Sowerby.

SIPHONARIA CONCINNA Sowerby.

Cat. No. 19194, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at Cape of Good Hope. Cat. No. 31567*a*, U.S.N.M., three young specimens from the same locality. Cat. No. 186651, U.S.N.M., three specimens from Port Alfred (Coll. No. 5).

SIPHONARIA CAPENSIS Quoy and Gaimard.

Cat. No. 19188, U.S.N.M., one specimen collected by Archer at Cape of Good Hope. Cat. No. 21821, U.S.N.M., one specimen from Dunker, collected at the same locality. Cat. No. 31567, U.S.N.M., one specimen from Cape of Good Hope. Cat. No. 173070, U.S.N.M., one specimen from Lieut. Col. L. W. Wilner from Cape of Good Hope. Cat. No. 250574, U.S.N.M., contains three very young specimens from Port Alfred (Coll. No. 1447).

SIPHONARIA CAPENSIS LINEOLATA Krauss.

Cat. No. 31565, U.S.N.M., two specimens from Cape of Good Hope. Cat. No. 31570, U.S.N.M., three specimens from the same locality. Cat. No. 186652, U.S.N.M., two specimens from Port Alfred (Coll. No. 6), and another, Cat. No. 250575, U.S.N.M., from the same locality (Coll. No. 1448).

SIPHONARIA ASPERA Krauss.

Cat. No. 186653, U.S.N.M., two specimens from Port Alfred (Coll. No. 7).

## SIPHONARIA OCULUS Krauss.

Cat. No. 115, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 272111, U.S.N.M., contains another specimen from South Africa.

## Family GADINIIDAE.

## Genus GADINIA Gray.

## GADINIA COSTATA Krauss.

Cat. No. 186649, U.S.N.M., two specimens from Port Alfred (Coll. No. 3).

## Family AMPHIBOLIDAE.

## Genus AMPULLARINA Sowerby.

## AMPULLARINA AFRICANA Smith.

Cat. No. 186650, U.S.N.M., one specimen from Port Alfred (Coll. No. 4).

## Order ORTHODONTA.

## Family TEREBRIDAE.

## Genus TEREBRA Bruguiere.

## TEREBRA CAPENSIS Smith.

Cat. No. 186660, U.S.N.M., three specimens from Port Alfred (Coll. No. 15).

## TEREBRA SUSPENS A Smith.

Cat. No. 186661, U.S.N.M., contains four specimens from Port Alfred (Coll. No. 16).

## TEREBRA DIVERSA Smith.

Cat. No. 18, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at False Bay.

## TEREBRA APICITINCTA Sowerby?

Cat. No. 187034, U.S.N.M., one worn specimen which appears to belong here, from Port Alfred (Coll. No. 570). Cat. No. 250410, U.S.N.M., contains a fragment from the same place (Coll. No. 1283).

## TEREBRA, species?

Cat. No. 250483, U.S.N.M., contains a smooth apex of a very small *Terebra*, from Port Alfred (Coll. No. 1356).

## Family CONIDAE.

## Genus CONUS Linnaeus.

## CONUS, species?

Cat. No. 250302, U.S.N.M., contains a worn and bleached specimen of a magnificent cone, having three dark bands; one immediately

beneath the shoulder, one a little posterior to the middle; another on the anterior fourth of the whorls, separated by two light bands; the entire surface is marked also by irregular, vertical zigzag brown markings.

I have been unable to identify this shell with any of the known species, and the specimen is too poor to serve as the type of a new species (Coll. No. 1175).

**CONUS ROSACEUS** Chemnitz.

Seven lots of this species before us are from Port Alfred. Cat. No. 186665, U.S.N.M., three specimens (Coll. No. 20). Cat. No. 227706, U.S.N.M., three specimens (Coll. No. 801). Cat. No. 249645, U.S.N.M., two specimens (Coll. No. 917). Cat. No. 249649, U.S.N.M., one specimen (Coll. No. 921). Cat. No. 249651, U.S.N.M., one specimen (Coll. No. 923). Cat. No. 249652, U.S.N.M., three specimens (Coll. No. 924). Cat. No. 250309, U.S.N.M., one specimen (Coll. No. 1182).

In addition to these, the Museum has two lots from the mouth of Fish River, South Africa. Cat. No. 97983, U.S.N.M., three specimens, and 97984, three specimens. Cat. No. 18799, U.S.N.M., one from Port Elizabeth.

**CONUS AURORA** Sowerby.

Eight lots of this species, all from Port Alfred, are in the collection of the United States National Museum. Cat. No. 249648, two specimens (Coll. No. 920). Cat. No. 249650, two specimens (Coll. No. 922). Cat. No. 249655, two specimens (Coll. No. 927). Cat. No. 249657, one specimen (Coll. No. 929). Cat. No. 250304, one specimen (Coll. No. 1177). Cat. No. 250305, one specimen (Coll. No. 1178). Cat. No. 250306, one specimen (Coll. No. 1179). Cat. No. 250316, one specimen (Coll. No. 1189).

**CONUS LAVENDULUS**, new species.

Plate 1, fig. 10.

Shell obese, with moderately elevated spire. Summits of the whorls separated by well-impressed sutures, moderately rounded, marked by a number of somewhat irregular spiral striations. Entire surface of the body whorl marked by numerous fine, closely spaced, wavy, spiral striations. In addition to these striations, a series of spiral lirations are present on the anterior third of the last whorl, which are a little more closely spaced near the extreme anterior portion. Ground color pale lavender, marbled and variegated with russet-brown. Interior of outer lip purple posteriorly, fading to purplish-white at the anterior margin.

The type, Cat. No. 186973, U.S.N.M., and one other specimen, are from Port Alfred (Coll. No. 505). The type has  $7\frac{1}{4}$  whorls and measures: Length, 36.1 mm.; diameter, 21 mm.

The following additional specimens have been examined: Cat. No. 97985, U.S.N.M., 3 specimens from the mouth of Fish River. Six additional lots, all collected by Colonel Turton at Port Alfred, are as follows: 4, Cat. No. 227709, U.S.N.M. (Coll. No. 804). 3, Cat. No. 249644, U.S.N.M., (Coll. No. 916). 2, Cat. No. 249654, U.S.N.M. (Coll. No. 926). 1, Cat. No. 250303, U.S.N.M. (Coll. No. 1176). 1, Cat. No. 250311, U.S.N.M. (Coll. No. 1184). 1, Cat. No. 250313, U.S.N.M., (Coll. No. 1186).

**CONUS ALFREDENSIS, new species.**

Plate 1, fig. 12.

Shell elongate-ovate, with broadly conic, well-elevated spire. Whorls well rounded at their summit, which is marked by a few feebly incised spiral lines. Sutures well impressed. Posterior half of body whorl smooth, anterior half crossed by oblique, low, rounded, spiral lirations. Lip simple. Columella with a twist a little above its anterior extremity. Color pinkish-white, with irregular blotches, flecks, dots, and streaks of pale ochraceous. Inside of outer lip purplish-white.

The two specimens, Cat. No. 186972, U.S.N.M., from Port Alfred may be considered cotypes. One of these has 7 whorls and measures: Length, 35 mm.; diameter, 16 mm. The other has eight turns and measures: Length, 45 mm.; diameter, 20 mm. (Coll. No. 504). Cat. No. 43144, U.S.N.M. contains three young specimens from the Cape of Good Hope.

**CONUS CAFFER Krauss.**

Seven lots of this species have been examined, all collected by Colonel Turton at Port Alfred. They are as follows:

2, Cat. No. 186665, U.S.N.M. (Coll. No. 20). 4, Cat. No. 227707, U.S.N.M. (Coll. No. 802). 3, Cat. No. 227708, U.S.N.M. (Coll. No. 803). 3, Cat. No. 249647, U.S.N.M. (Coll. No. 919). 2, Cat. No. 249656, U.S.N.M. (Coll. No. 928). 1, Cat. No. 250310, U.S.N.M. (Coll. No. 1183). 1, Cat. No. 250314, U.S.N.M. (Coll. No. 1187).

In addition to these, I have seen four specimens, Cat. No. 98001, U.S.N.M., from the mouth of Fish River, and 1, Cat. No. 43144a, U.S.N.M., from the Cape of Good Hope.

**CONUS GUTTATUS Kiener.**

I have seen four lots of this species, all from Port Alfred, as follows:

2, Cat. No. 249646, U.S.N.M. (Coll. No. 918). 1, Cat. No. 249658, U.S.N.M. (Coll. No. 930). 1, Cat. No. 250307, U.S.N.M. (Coll. No. 1180). 1, Cat. No. 250312, U.S.N.M. (Coll. No. 1185).



**CONUS PICTUS** Reeve.

I have seen five specimens of this species from South Africa, three collected by Colonel Turton at Port Alfred.

1, Cat. No. 186663, U.S.N.M. (Coll. No. 18). 2, Cat. No. 249653, U.S.N.M. (Coll. No. 925). 2, Cat. No. 97986, U.S.N.M. from the mouth of Fish River, South Africa.

**CONUS INFRENATUS** Reeve.

I have seen seven specimens of this species from South Africa, four of which were collected by Colonel Turton at Port Alfred, as follows: Cat. No. 186662, U.S.N.M., two specimens (Coll. No. 17); Cat. No. 250308, U.S.N.M., one specimen (Coll. No. 1181); Cat. No. 250315, U.S.N.M., one specimen (Coll. No. 1188); Cat. No. 97987, U.S.N.M., three specimens from the mouth of Fish River.

**CONUS ALGOËNSIS** Sowerby.

Cat. No. 170, U.S.N.M., one specimen collected by William Stimpson, on the North Pacific Exploring Expedition at False Bay. Cat. No. 18516, U.S.N.M., one from the Cape of Good Hope.

**CONUS BAIRSTOWI** Sowerby.

One specimen, Cat. No. 186664, U.S.N.M., from Port Alfred (Coll. No. 19).

**CONUS CROTCCHI** Reeve.

Cat. No. 130748, U.S.N.M., one specimen bearing the general locality South Africa.

**CONUS**, species (?).

Cat. No. 186974, U.S.N.M., contains a specimen too badly worn to be specifically determined, from Port Alfred (Coll. No. 506).

Family **TURRITIDAE**.Genus **CLIONELLA** Gray.**CLIONELLA KRAUSSII** Smith.

Cat. No. 186666, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 21). Another individual, Cat. No. 21780, U.S.N.M., collected at Algoa Bay, was received from Dunker under the name of *Drillia fucata* Reeve.

**CLIONELLA BIPARTITA** Smith.

Cat. No. 186667, U.S.N.M., contains two specimens of this species from Port Alfred (Coll. No. 22).

**CLIONELLA SUBVENTRICOSA** Smith.

Cat. No. 186668, U.S.N.M., two specimens from Port Alfred (Coll. No. 23). Cat. No. 272115, U. S. N. M. another from South Africa.

*CLIONELLA CONFUSA* Smith.

This species is wonderfully variable in coloration; 10 specimens before me, Cat. No. 252108, U.S.N.M., selected from a lot of 76 specimens, (Coll. No. 1607), from Port Alfred, show the following variations in color. Some have the base white, the tip rose colored, and the intermediate portion brown; the latter may be unicolor, spotted or marbled with brown. Others are rose colored throughout, with mottlings and spottings of brown; some of them even have the narrow white zone at the summit, characterizing *C. rosaria*. Still others are pale lavender with rose colored tips; these again may be variously mottled. Some of them are uniformly rose colored without any additional mottlings, while others are pale yellow. Some have a narrow dark zone at the summit and another dark band on the base.

I have seen two additional lots from Port Alfred, 3, Cat. No. 186669, U.S.N.M. (Coll. No. 24), and Cat. No. 227756, U.S.N.M., six specimens (Coll. No. 851). Cat. No. 90681, U.S.N.M., one from the Cape of Good Hope. Cat. No. 97917b, U.S.N.M., contains two from the same locality. Cat. No. 18797, U.S.N.M., contains a specimen from Port Elizabeth.

*CLIONELLA ROSARIA* Reeve.

Cat. No. 186669a, U.S.N.M., one specimen from Port Alfred (Coll. No. 24). Cat. No. 227757, U.S.N.M., four specimens from the same locality (Coll. No. 852). Cat. No. 252109, U.S.N.M., 10 specimens from the same place (Coll. No. 1608). In addition to these, I have seen 70 specimens which have been returned to the collector, bearing the same collector's number as the last.

*CLIONELLA SYBARITICA*, new species.

Plate 7, fig. 8.

Shell elongate-conic. Nuclear whorls decollated. Post-nuclear whorls moderately rounded, constricted at the sinus, which causes the summit of the turns to appear as a cord. The space between the sutures is variously mottled with flesh color and chestnut spots and streaks. The base, beginning at the periphery, is rose colored, a little paler on the columella than the rest. The whorls are marked with strong, protractive, axial ribs, which are about as wide as the spaces that separate them; of these, 14 occur upon the first to sixth whorl, while on the last whorl the number increases to about 20. These ribs are interrupted at the sinus a little distance below the summit, and become decidedly enfeebled on the base, vanishing before they reach the columella. In addition to the axial ribs the surface is marked by numerous strong lines of growth. The spiral sculpture consists of equal and equally spaced spiral striations, which are about as broad as the spaces that separate them; these are best expressed in the

groove of the sinus. The lirae, between the spiral striations and the axial lines of growth, inclose numerous small pits, giving the entire surface between the sutures the appearance of a grating. On the base the lines of growth are less strongly developed and the pitting is less pronounced. Aperture rather short; posterior angle obtuse; the sinus is about as broad as the cord above it at the summit of the whorls. The space between the sinus and the anterior portion of the outer lip forms a claw-like element. Columella strong, its inner edge, like the parietal wall, glazed with a thin callus.

The type and another specimen, Cat. No. 250460, U.S.N.M., come from Port Alfred (Coll. No. 1333). The type has lost the nucleus; the seven whorls remaining measure: Length, 20.5 mm.; diameter, 7 mm.

*CLIONELLA NEREIA*, new species.

Plate 2, fig. 8.

Shell fusiform, chestnut brown variegated with yellowish brown and white, with the apex and anterior portion of base a little lighter than the rest. Whorls with a low rounded subsutural spiral keel that is about one-fifth the width of the space between the sutures. The keel is bordered anteriorly by a shallow sulcus which is about half as wide as the keel. The remaining portions of the whorls on the spire are marked by low, rounded, protractive, axial ribs, which vary somewhat in strength. Of these, there are 14 upon the third; 16 upon the fourth; 18 upon the fifth; and 16 upon the penultimate turn. In addition to the ribs, the ribbed part of the whorl between the sutures is marked by four, strongly incised, equal and subequally spaced, spiral lines. Summits of the whorls rounded. Sutures well impressed. Posterior half of the base well rounded, marked by several well incised spiral lines; and the weak continuations of the axial ribs. Anterior half produced, ornamented by five moderately strong lirations. Entire surface of spire and base covered by numerous strong incremental lines, which are slightly retractive on the subsutural keel and protractive on the rest of the shell. Aperture irregular; posterior angle acute; sinus deep and narrow, somewhat below the summit; outer lip strongly curved; columella short and slightly curved, glazed with a thin callus which also extends upon the parietal wall.

The type, Cat. No. 205942, U.S.N.M., comes from Port Alfred (Coll. No. 24). It has seven whorls, and measures: Length, 14.0 mm.; diameter, 5.7 mm. Cat. No. 250456, U.S.N.M., three from the same place (Coll. No. 1329). Cat. No. 272116, U.S.N.M., contains two additional specimens from South Africa.

*CLIONELLA ELIZABETHAE*, new species.

Plate 4, fig. 1.

Shell broadly fusiform. Posterior two-fifths of the whorls between the sutures with a strongly excavated channel; anterior three-fifths

marked by 10-12 prominent, broad, low, rounded, somewhat protractive axial ribs which are truncated posteriorly by the channel, their terminations forming cusps. Intercostal spaces about twice as wide as the ribs. The ribbed portions of the whorls on the spire are covered by five, equal and equally spaced, incised, spiral lines. Summit of the whorls appressed, rendering the sutures ill defined. Base of the last whorl moderately long, marked by the feeble continuations of the axial ribs and on the posterior half by five incised spiral lines equaling those on the spire in strength and spacing and forming a continuous series with them. Anterior portion of base with about seven ill-defined spiral lirations. Aperture narrowly elongate pyriform, sinus shallow immediately below the sutures; outer lip somewhat sinuous; columella strong, slightly sigmoid. The coloration of the type consists of a creamy white ground, which is almost unmarked in the subsutural channel and on the anterior half of the base on the last turn. A few dots of brownish orange appear near the summit between the ribs of the preceding whorls. The ribbed portion of the whorl between the anterior and posterior portion of the base is strongly mottled with brownish orange in the intercostal spaces, less so on the summits of the ribs, while a little posterior to the middle the base is marked by two slender spiral lines of the same color.

The type, Cat. No. 18796, U.S.N.M., has lost the early whorls; the four and one-half remaining measure: Length, 13 mm.; diameter, 7 mm. It comes from Port Elizabeth.

*CLIONELLA SEMICOSTATA* Kiener

Cat. No. 16913, U.S.N.M., one specimen from Cape of Good Hope.

*CLIONELLA TURTONI*, new species.

Plate 2, fig. 2.

Shell fusiform, covered with thick brownish olive epidermis. (Nuclear whorls decollated.) Post-nuclear whorls flattened excepting the contraction of the anal sulcus, which is a little anterior to the posterior third of the space between the sutures; slightly shouldered at the summit. Subsutural cord well rounded, marked by feeble extensions of the ribs, which have a retractive slant. Anal sulcus a mere constriction. Posterior to the sinus the last whorl is marked by very low, poorly developed, somewhat sinuous protractive axial ribs, each of which bears a weak nodule at the sulcus. In addition to the axial ribs the entire surface of the spire and base is marked by numerous strong lines of growth and spiral striations, the combination of the two giving the surface a finely reticulated appearance. Sutures strongly marked. Periphery of the last whorl well rounded. Base moderately long with a slender fasciole at the insertion of the col-

umella. Aperture irregular; outer lip with a broad moderately deep sinus, anterior portion well curved. Columella somewhat sinuous, covered by a strong callus which extends up on the parietal wall.

The type and one other specimen, Cat. No. 186670, U.S.N.M., come from Port Alfred (Coll. No. 25). The type has lost the nucleus and probably the first post-nuclear turn; the seven remaining measure: Length, 26.5 mm.; diameter, 10.0 mm.

*CLIONELLA*, species?

Cat. No. 250458, U.S.N.M., contains a young specimen of a large species from Port Alfred, which I am unable to identify with any of the named species (Coll. No. 1331).

*CLIONELLA SINUATA* Born.

Cat. No. 194, U.S.N.M., contains three specimens of this species obtained by William Stimpson on the North Pacific Exploring Expedition at Simons Bay.

*CLIONELLA BORNII* Smith.

Cat. No. 186994, U.S.N.M., three specimens from Port Alfred (Coll. No. 526), and Cat. No. 97917a, U.S.N.M., one specimen from Cape of Good Hope.

*CLIONELLA?* *PLATYSTOMA* Smith.

Cat. No. 186671, U.S.N.M., three specimens from Port Alfred (Coll. No. 26) and Cat. No. 186999, U.S.N.M. (Coll. No. 531) from the same locality.

*CLIONELLA*, species?

Cat. No. 187000, U.S.N.M., contains the tip of a large shell which we are unable to refer to any of the species listed from South Africa. (Coll. No. 532).

*CLIONELLA*, species?

Cat. No. 186996, U.S.N.M., three specimens from Port Alfred, which I am unable to refer to any of the species listed from South Africa. They are too poor to be properly diagnosed (Coll. No. 528).

Genus *TURRIS* Humphrey.

*TURRIS FULTONI* Sowerby.

Cat. No. 186672, U.S.N.M., one specimen from Port Alfred (Coll. No. 28). Cat. No. 249735, U.S.N.M., contains another specimen from the same locality (Coll. No. 1007).

Genus *CLAVATULA* Lamarck.

*CLAVATULA TAXUS* Kiener.

Cat. No. 186991, U.S.N.M., one specimen from Port Alfred (Coll. No. 523).



*CLAVATULA HALIPLEX*, new species.

Plate 2, fig. 3.

Shell robust, fusiform. Whorls sloping from the summit and the periphery to a depressed line midway between the sutures. The portion posterior to the median line is smooth excepting the strongly retractive lines of growth and spiral striations. The portion anterior to it is marked by distant, low, broad, feebly developed axial ribs, which appear as nodules above the sulcus. On this part the incremental lines are decidedly protractive. Sutures well marked. Posterior portion of base well rounded, anterior part produced rendering the left outline of the whorl concave, marked by feeble extensions of the ribs which disappear shortly after passing over the periphery. Entire surface of spire and base marked by very fine, closely spaced wavy spiral striations. Aperture of irregular outline; posterior angle acute; sinus moderately deep, in the middle between the periphery and summit; columella stout, somewhat sinuous and twisted, covered by a thin callus, which also extends over the parietal wall. Color uniformly cream yellow. In some of the young specimens the space between the sulcus and summit and tip of base are white, the rest light brown.

The type and one other individual, Cat. No. 186992, U.S.N.M., come from Port Alfred (Coll. No. 524). The type has lost its early whorls, the seven remaining measure: Length, 29.5 mm.; diameter, 11.6 mm. Cat. No. 186997, U.S.N.M., contains three young individuals from the same locality (Coll. No. 529).

*CLAVATULA HALISTREPTA*, new species.

Plate 2, fig. 5.

Shell fusiform. Whorls marked by a narrow, obscurely nodulous spiral keel at the summit, which is followed by a depressed spiral sulcus that equals the keel in width, the two comprising the posterior two-fifths of the whorls between the sutures. Anterior three-fifths marked by strong, broad, low, rounded, slightly protractive axial ribs, which are strongest at their junction with the sulcus, beyond which they scarcely extend. The type has lost the early whorls; upon the first of those remaining there are 10 and upon the rest, 12 ribs. Intercostal spaces about one-half as wide as the ribs. On account of the closely appressed summits, the sutures are poorly defined. Base of the last whorl moderately long, marked by the continuations of the ribs, which gradually weaken in strength as they pass forward. Entire surface of the spire and base marked by lines of growth and numerous, closely crowded, fine, wavy, spiral striations. Posterior angle of aperture acute, sinus below the keel at the summit; columella sigmoid, covered by a thin callus which also extends over



the parietal wall, in the posterior portion of which it becomes decidedly thickened. Ground color cream yellow; intercostal spaces and slight extensions of their areas posteriorly across the sulcus and the summit of the keel chestnut brown. The same coloration appears within the aperture.

The type and one other specimen, Cat. No. 186993, U.S.N.M., were collected at Port Alfred (Coll. No. 525). The type has the last seven whorls and measures: Length, 33.5 mm.; diameter, 11.8 mm.

Cat. No. 186998, U.S.N.M., contains an additional specimen from the same locality (Coll. No. 530).

**CLAVATULA HELENA, new species.**

Plate 8, fig. 2.

Shell moderately large, spindle shaped, ground color wax yellow, upon which are disposed blotches and streaks of chestnut brown. On the spire, the anterior half of the intercostal spaces between the sutures, is brown; nuclear whorls decollated; postnuclear whorls flattened, with a narrow, well-rounded keel posterior to the sinus; the sinus itself appears as a well-impressed, broad, shallow sulcus, the two extending over the posterior half of the shell between the sutures. The anterior half is marked with feeble, decidedly protractive, axial ribs, of which 8 occur upon the first and second, 10 upon the third and fourth, and 12 upon the penultimate turn. The spaces between these ribs are about as wide as the ribs. In addition to the above sculpture, the spire is marked by exceedingly fine lines of growth. Sutures moderately impressed; periphery of the last whorl well rounded. Base moderately long, marked by the feeble continuations of the axial ribs, and about 20 poorly defined spiral threads which are separated by narrow, incised lines. These threads are a little better developed on the anterior half than on the posterior half of the base. Aperture elongate-oval; posterior angle acute; outer lip quite thick, notched at the sinus; inner lip appressed to the base; parietal wall covered by a very thick callus.

The type and two specimens, Cat. No. 227761, U.S.N.M., come from Port Alfred (Coll. No. 856). The type has lost the nuclear whorls and probably the first post nuclear turn. The six remaining measure: Length, 28 mm.; diameter, 12 mm.

**CLAVATULA, species?**

Cat. No. 186995, U.S.N.M., contains a worn specimen from Port Alfred allied to *C. haliplex* (Coll. No. 527).

**Genus DRILLIA Gray.**

**DRILLIA ROUSI Sowerby.**

Cat. No. 186673, U.S.N.M., two specimens from Port Alfred (Coll. No. 29).

*DRILLIA CAFFRA* Smith.

Cat. No. 186674, U.S.N.M., four specimens from Port Alfred (Coll. No. 30).

*DRILLIA SIGNA*, new species.

Plate 7, fig. 4.

Shell broadly conic. Nuclear whorls rose colored, the later portion of the shell horn yellow, with a broad chestnut band, which extends from the periphery anteriorly, over one-third of the base, gradually paling to fuse with the ground color. Whorls moderately rounded, strongly, tabulatedly shouldered at the summit. The portion between the angle near the summit and the periphery is crossed by low, broad axial ribs, of which 14 occur upon the fourth and fifth and 16 upon the last whorl. On the base of the last whorl these ribs gradually become evanescent. In addition to the axial ribs, the whorls are marked by lines of growth and numerous fine, closely spaced spiral striations, which are about as wide as the spaces that separate them. These spiral striations occur equally strong at the shoulder of the summit and on the base. Aperture moderately large; posterior angle decidedly obtuse; sinus very shallow, forming the angle at the shoulder; outer lip thin, showing the external color markings within; inner edge of the columella and parietal wall glazed with a thin callus.

The type, Cat. No. 250457, U.S.N.M., comes from Port Alfred (Coll. No. 1330). It has seven whorls and measures: Length, 14 mm.; diameter, 6.2 mm.

*DRILLIA LAYARDI* Sowerby.

Cat. No. 186675, U.S.N.M., three specimens from Port Alfred (Coll. No. 31). Cat. No. 272113, U.S.N.M., two from South Africa.

*DRILLIA DIVERSA* Smith.

Cat. No. 186676, U.S.N.M., three specimens from Port Alfred (Coll. No. 32).

*DRILLIA BAIRSTOWI* Sowerby.

Cat. No. 186677, U.S.N.M., four specimens from Port Alfred (Coll. No. 33). Two additional specimens, Cat. No. 249732, U.S.N.M., come from the same place (Coll. No. 1004).

*DRILLIA HOTTENTOTA* Smith.

Cat. No. 186678, U.S.N.M., seven specimens from Port Alfred (Coll. No. 34). Also Cat. No. 187007, U.S.N.M., two young individuals from the same locality (Coll. No. 540) and Cat. No. 187008, U.S.N.M., another immature shell from the same place (Coll. No. 541). Cat. No. 272117, U.S.N.M., one from South Africa.

*DRILLIA ALBONODULOSA* Smith.

Cat. No. 186679, U.S.N.M., two specimens from Port Alfred (Coll. No. 35).

*DRILLIA THETIS* Smith.

Cat. No. 186680, U.S.N.M., four specimens from Port Alfred (Coll. No. 36). Cat. No. 249733, U.S.N.M., contains another specimen from the same locality (Coll. No. 1005).

*DRILLIA NIVOSA* Smith.

Cat. No. 186681, U.S.N.M., five specimens from Port Alfred (Coll. No. 37). Cat. No. 249731, U.S.N.M., contains two additional specimens from the same locality (Coll. No. 1003).

*DRILLIA SUBCONTRACTA* Smith.

Cat. No. 186282, U.S.N.M., five specimens from Port Alfred (Coll. No. 38). Cat. No. 272114, U.S.N.M., one from South Africa.

*DRILLIA PRAETERMISSA* Smith.

Cat. No. 186683, U.S.N.M., four specimens from Port Alfred (Coll. No. 39). Cat. No. 187002, U.S.N.M., two specimens from the same source (Coll. No. 534). Cat. No. 227762, U.S.N.M., two specimens from the same locality (Coll. No. 857).

*DRILLIA LARA*, new species.

Plate 2, fig. 4.

Shell fusiform, orange yellow; shoulder a little lighter colored than the rest of the turns. Posterior third of the whorls between the sutures marked by a concave sulcus, which is crossed by fine retractive lines of growth and many, very fine, closely spaced, wavy, spiral striations. Anterior two-thirds of the whorls between the sutures marked by low, rounded, decidedly protractive, axial ribs, which are truncated posteriorly at the anterior margin of the sulcus; anteriorly they pass feebly over the periphery and part of the base. There are 12 of these ribs upon all but the penultimate turn; the latter has 14. The ribbed portion of the whorl on the spire is marked by about 20 equal and equally spaced spiral striations. Intercostal spaces almost as wide as the ribs. Summits of the whorls appressed. Sutures ill defined. Base of the last whorl gently rounded posteriorly, the somewhat produced extremity giving the left outline a slightly concave appearance in the middle. The posterior portion of the base is spirally striated like the space immediately posterior to it. Anteriorly the base is marked by slender spiral lirations, which are strongest at the basal extremity. Aperture of irregular outline; outer lip deeply channeled at the posterior angle, very strongly curved in the middle, the edge of which is infolded; columella moderately long, stout, covered by a slight callus which extends up over the parietal wall, in the posterior part of which it becomes somewhat thickened.

The type, Cat. No. 187001, U.S.N.M., and another specimen come from Port Alfred (Coll. No. 533). The type has seven whorls and measures: Length, 13.6 mm.; diameter, 5.8 mm. Cat. No. 272118 U.S.N.M., one from Port Elizabeth, South Africa.

*DRILLIA HALIDOMA*, new species.

Plate 2, fig. 9.

Shell robust, rufous orange. Whorls with a narrow, obscurely nodulous keel immediately below the summit, followed by a sulcus that is a little wider than the keel, the two almost equaling the width of the spaces between the sutures. Anterior half of the whorl between the sutures inflated, of much greater diameter than the rest of the whorls, marked by very broad, low, rounded, slightly protractive, axial ribs, which terminate posteriorly in rounded knobs, while anteriorly they extend feebly over the periphery and part of the base. There are 12 of these ribs on the early whorls and 14 upon the penultimate. Posterior part of base well rounded, anterior part produced, which renders the left outline of the base concave. Entire surface of spire and base marked by incremental lines and fine, wavy, spiral striations on the subsutural keel and sulcus. The ribbed parts of the spire and base are marked by slender raised lirations, of which 3 appear between the sutures and 8 on the base, the latter becoming successively narrower from the periphery to the extremity of the base. Aperture irregularly ovate; posterior angle acute, sinus deep, somewhat below the summit; outer lip decidedly curved; columella moderately long, slightly sigmoid, covered by a thin callus, which extends upon the parietal wall.

The type, Cat. No. 90678, U.S.N.M., comes from the Cape of Good Hope. It has lost the early whorls; the 6 remaining measure: Length, 18.6 mm.; diameter, 9.6 mm.

*DRILLIA*, species?

Cat. No. 97917, U.S.N.M., a young individual from Cape of Good Hope, which can not be referred to any of the forms listed from South Africa.

Genus *MANGILIA* (Leach) Risso.

*MANGILIA CAPENSIS* Smith.

Cat. No. 186684, U.S.N.M., three species from Port Alfred (Coll. No. 40). Cat. No. 272119, U.S.N.M., two from South Africa.

*MANGILIA DINA*, new species.

Plate 2, fig. 1.

Shell milk white. Nuclear whorls  $2\frac{1}{2}$ , dextral, forming a low apex, the first small and smooth, the second much larger, marked by very slender riblets and fine spiral lirations which increase in strength

with the growth of the whorls. Post-nuclear whorls very strongly shouldered at about one third of the distance between the sutures anterior to the summit, marked by strong, somewhat protractive axial ribs, of which 12 occur upon all but the penultimate turn; upon this there are 14. Intercostal spaces about three times as wide as the ribs. In addition to the axial sculpture the whorls are marked by spiral lirations which are of two strengths. Four of the stronger cross the whorls between the periphery and the shoulder; of these one is immediately above the suture and one at the angle of the shoulder, the other two divide the space between them into three unequal areas. The space between the peripheral and second strong liration is crossed by four slender subequal spiral threads; that between the second and third also by four, that between the third and fourth by five, of which the middle one is a little stronger than the rest. The space between the shoulder and the summit of the whorls is marked by about 20 slender, equal and equally spaced, spiral threads. Sutures strongly marked. Periphery of the last whorl well rounded. Base attenuated, marked by strong and fine lirations like the spire, those on the columellar portion being stronger than the rest. There are twelve strong threads having a somewhat variable number of finer threads between them. The entire surface of spire and base is also marked by fine lines of growth which give a pitted appearance to the spaces between the fine spiral lines in the intercostal spaces. All the spirals cross the axial ribs and the coarser ones render their junctions with the ribs slightly nodulose. Aperture of irregular shape; outer lip scythe-shaped, the border of the deep-rounded notch which is immediately below the summit representing the handle, the flattened surface of the strongly in-bent outer lip forming the blade; the surface of the latter is finely, spirally striated; columellar wall covered by a thin callus which extends upon the parietal wall.

The type, Cat. No. 186686a, U.S.N.M., comes from Port Alfred (Coll. No. 42). It has seven whorls, and measures: Length, 6.0 mm.; diameter, 2.4 mm.

*MANGILIA VERRUCOSA* Sowerby.

Cat. No. 227758, U.S.N.M., two specimens from Port Alfred (Coll. No. 853).

*MANGILIA GISNA*, new species.

Plate 7, fig. 3.

Shell small, golden brown. Nuclear whorls one and a half, smooth, forming a rather elevated apex. Post-nuclear whorls, well rounded, shouldered at the summit, marked by strong spiral cords, of which 3 occur upon the first two whorls between the sutures, and 4 upon the penultimate. The base of the last whorl is marked by eight addi-



tional cords, which equal those between the sutures in strength and have about the same spacing. The spaces between these spiral cords are about as wide as the cords. In addition to the spiral cords, the whorls are marked by slender axial ribs, which are slightly protractive. Of these ribs, 12 occur upon the first, 16 upon the second and 28 upon the last turn. The junctions of the axial ribs with the spiral cords form slender tubercles, while the spaces enclosed between them appear as well rounded, strongly impressed pits. On the anterior half of the base, the axial riblets become much enfeebled, so that here the pitting is less apparent. Sutures strongly constricted; aperture moderately large, decidedly channeled posteriorly and anteriorly; outer lip thin, showing the external sculpture within. The inner edge of the columella and the parietal wall is covered with a thin callus.

The type and two specimens of this species, Cat. No. 249730, U.S.N.M., come from Port Alfred (Coll. No. 1002). The type has four postnuclear whorls and measures: Length, 3.1 mm.; diameter, 1.4 mm.

**MANGILIA CONSANGUINEA** Sowerby.

Cat. No. 249747, U.S.N.M., contains one specimen from Port Alfred (Coll. No. 1019). This species was described by Sowerby as *Columbella consanguinea*, but we believe that it belongs to *Mangilia*.

**MANGILIA NISGA**, new species.

Plate 7, fig. 1.

Shell small, yellowish white. Nuclear whorls small, one and a half, smooth, forming a very small, well-rounded, white apex. Post-nuclear whorls with a very strong sloping shoulder, which is bounded anteriorly by a strong tuberculated spiral cord. In addition to this cord, the whorls are marked by three additional cords, which decrease in strength successively from the strong cord at the shoulder, to the suture. The space between the strong shoulder and the summit of the shell is marked by a strong spiral thread. Base of the last whorl marked by a peripheral cord, about as strong as the one adjacent to it posteriorly and two others as strong as this, having the same spacing as those on the spire. The columella is provided with four cords, of which the fourth, which marks the anterior limit of the columella, is as strong as the first, while the two intermediate ones are less strongly developed. In addition to the spiral sculpture, the whorls are marked with rounded, low, quite regularly spaced, axial ribs, of which 10 occur upon the first and second, and 14 upon the last turn. These ribs render the spiral cords tuberculated at their junction with them. In addition to these strong axial ribs, the entire surface of the shell, between the sutures and the anterior half of the

base, is marked by numerous, quite regular, closely spaced, axial threads, which are best shown in the spaces between the spiral cords and on the tabulated summit of the whorls. Aperture rather large, scarcely channeled posteriorly; outer lip very thick, rendered denticulate on the outside by the spiral cords; inner lip and parietal wall glazed with a thin callus.

The type, Cat. No. 250463, U.S.N.M., comes from Port Alfred (Coll. No. 1336). It has four post-nuclear whorls and measures: Length, 3.1 mm.; diameter, 1.5 mm.

**MANGILIA HELGA**, new species.

Plate 7, fig. 2.

Shell wax yellow. Nuclear whorls one and a half, well rounded, apparently smooth. Post-nuclear whorls strongly, tabulatedly shouldered, marked by strong, spiral cords, of which 3 occur between the angle of the shoulder and the suture on all the whorls; these are a little wider than the spaces that separate them. On the middle of the tabulated shoulder, a slender spiral cord begins on the first whorl, which increases in strength until it is about half as strong as those anterior to it on the last turn. Sutures strongly constricted. Periphery of the last whorl marked by a cord fully as strong as those posterior to it. Base moderately prolonged, slightly rounded, marked by three spiral cords which are almost as strong as those on the spire and of about equal spacing with them. Aperture feebly channeled posteriorly, decidedly so anteriorly; outer lip rendered sinuous by the spiral cords; inner lip and parietal wall covered with a thin callus.

The type, Cat. No. 250470, U.S.N.M., comes from Port Alfred (Coll. No. 1343). It has three and a half post-nuclear whorls and measures: Length, 3 mm.; diameter, 1.1 mm.

**MANGILIA BENJAMINI**, new species.

Plate 7, fig. 5.

Shell elongate-conic, flesh colored. Nuclear whorls, more than one, smooth. Post-nuclear whorls strongly rounded; the sinus falling at the summit where the whorls are somewhat contracted; surface of the post-nuclear whorls marked with strong, rounded, protracted axial ribs, which begin practically anterior to the sinus and extend strongly to the periphery; they are scarcely defined anterior to this on the last whorl. Of these ribs 10 occur upon the first to fourth, 12 upon the fifth to seventh, and 14 upon the penultimate turn. The axial ribs are about as wide as the spaces that separate them. In addition to these axial ribs the whorls are marked by numerous slender spiral threads, of which about 5 occur in the area of the sinus on the last three turns. These are finer than those which cover

the rest of the turn between the sutures; of the latter 3 occur upon the first to third, 4 upon the fourth, 7 upon the fifth and sixth, 11 upon the next, and 13 on the last turn. The spaces between the spiral threads about equal the spiral threads in strength. The surface between the spiral threads is covered with fine granulations on the spire. The last whorl anterior to the periphery is marked by 27 spiral cords, which are about equal and equally spaced, being only a trifle stronger on the columella. Sutures well constricted; aperture with a strong deep sinus at its posterior angle, which renders the outer lip, anterior to this, decidedly claw-like; outer lip strongly reenforced within by a callus which bears about 15 denticulations on the inner surface. Columella and parietal wall glazed with a thin callus.

The type, Cat. No. 210, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at False Bay. It has nine post-nuclear whorls and measures: Length, 15.3 mm.; diameter, 5.7 mm. The specimen was labeled *Clathurella gracilis* Montagu. It differs from this in being uniformly smaller and having ever so many more spiral cords. Named for Dr. Marcus Benjamin of the United States National Museum.

MANGILIA? CRASSILIRATA Smith.

Cat. No. 187006, U.S.N.M., one specimen from Port Alfred (Coll. No. 538). Cat. No. 250459, U.S.N.M., contains another specimen from the same place (Coll. No. 1332).

MANGILIA ARATA, new species.

Plate 3, fig. 8.

Shell vinaceous cinnamon. Nuclear whorls two, dextral, smooth, well rounded. Post-nuclear whorls with the posterior third between the sutures forming sloping shoulders, the rest well rounded, ornamented by strong, rounded, almost vertical, axial ribs, which are about one-half as wide as the intercostal spaces. Ten of these ribs occur upon the first and second, 12 upon the third, and 14 upon the penultimate turn. In addition to the ribs the whorls are marked by strongly raised, narrow, spiral bands, of which, four, equally strong and equally spaced, divide the space between the suture and the shoulder and three, that between the shoulder and the summit; of these, two are close together, immediately posterior to the shoulder, while the third divides the space between them and the summit. Sutures somewhat constricted. Periphery of the last whorl well rounded. Posterior half of base well rounded and marked by the continuations of the axial ribs. Anterior half produced. Entire base crossed by 20 raised spiral bands, the posterior of which equals those on the spire, while those on the anterior extremity appear as rounded lirations. Aperture of irregular outline, channel strong and deep, separated from the parietal wall

by a thick callus; outer lip very strong, coming to a sharp edge strongly incurved in the middle; columella sinuous and twisted, strong, covered by a thin callus which extends up on the parietal wall.

The type, Cat. No. 168, U.S.N.M., was collected by William Stimpson at Simons Bay on the North Pacific Exploring Expedition. It has five post-nuclear whorls and measures: Length, 6.7 mm.; diameter, 3.0 mm.

*MANGILIA EUCOSMIA*, new species.

Plate 2, fig. 7.

Shell elongate-conic, slender, white with narrow brown bands. Nuclear whorls  $2\frac{1}{2}$ , dextral, strongly rounded, smooth, forming an elevated spire. Post-nuclear whorls with a strong shoulder one-third of the distance between the sutures anterior to the summit, the rest well rounded, marked by strong, narrow, sinuous, slightly protractive, axial ribs, of which 10 occur upon the first, 12 upon the second and third, 14 upon the fourth and fifth, and 16 upon the penultimate turn. Intercostal spaces about three times as wide as the ribs. The spiral sculpture consists of moderately broad, low, flattened spiral lirations, separated by channels a little less in width than the lirations. These lirations grow gradually wider from the summit to the periphery. There are 14 of them between the sutures on the penultimate turn. Base attenuated, marked by the continuations of the axial ribs and about 14 spiral lirations, those of the outer half where the ribs are absent being much stronger than the rest. Aperture almost oval, decidedly expanded at the posterior angle, where the outer lip is somewhat reflected by the shallow channel. Middle of the outer lip slightly inbent, thin; columella sinuous and somewhat twisted, covered by a thin callus which extends up on the parietal wall.

The type has nine whorls and measures: Length, 12.4 mm.; diameter, 4 mm. It and three other specimens, Cat. No. 187004, U.S.N.M., are from Port Alfred (Coll. No. 536). Cat. No. 187005, U.S.N.M., contains two specimens from the same locality (Coll. No. 537).

In some of the specimens, the spiral lirations show a tendency to split.

*MANGILIA HERILDA*, new species.

Plate 7, fig. 7.

Shell small, white. Nucleus consisting of at least one whorl, which appears to be smooth. (In our specimens this is somewhat worn.) Post-nuclear whorls, well rounded, separated by a well impressed suture, marked by strong, low, rounded, retractive axial ribs, which are not quite as broad as the spaces that separate them. Of these ribs, about 12 occur upon all the whorls. These ribs disappear shortly after passing over the periphery of the base. In addition



to the axial ribs, the surface of the shell is marked by numerous, fine lines of growth. The spiral sculpture consists of well-developed cords, which are about half as wide as the spaces that separate them. Of these cords, 4 occur between the sutures on the first turn, 5 upon the second, 6 upon the third and 7 upon the penultimate whorl. Base marked by about 15 spiral cords, which equal those on the spire in strength and spacing. Aperture moderately large; posterior angle obtuse, scarcely channeled; outer lip thin, rendered slightly sinuous by the spiral cords on the outside; columella and parietal wall covered with a thin callus.

The type and another specimen, Cat. No. 249734, U.S.N.M., come from Port Alfred (Coll. No. 1006). The type has five postnuclear whorls and measures: Length, 7.4 mm.; diameter, 3.1 mm.

**MANGILIA, species?**

Cat. No. 250454, U.S.N.M., contains a young specimen from Port Alfred, which we are unable to identify positively (Coll. No. 1327).

**MANGILIA GRAYI** Reeve.

Cat. No. 186686, U.S.N.M., five specimens from Port Alfred (Coll. No. 42). Cat. No. 250468, U.S.N.M., one from the same place (Coll. No. 1341).

**MANGILIA NYMPHA**, new species.

Plate 3, fig. 4.

Shell very small and slender, semitransparent, light yellow with the posterior third between the sutures bright chestnut brown on the later whorls, while the early ones are white. Nuclear whorls dextral,  $1\frac{1}{2}$ , helicoid, closely coiled, smooth and polished. Post-nuclear whorls well rounded with appressed summits, ornamented with protractive, well rounded, axial ribs, of which 12 occur upon the first, 14 upon the second, 16 upon the third, and 20 upon the last turn. Intercostal spaces a little wider than the ribs, crossed by equal and equally spaced spiral bars which pass up on the sides of the ribs but do not cross them; of these, seven appear between the sutures. Sutures well impressed. Periphery of the last whorl rounded. Base attenuated, marked by the feeble continuations of the axial ribs and spiral lirations which become dominant on the anterior portion where the ribs disappear, and these form continuous, raised, spiral threads. There are seven spiral threads on the base. Outer lip fractured, very thin, showing the external sculpture within; columella strongly sigmoid, covered by a thin callus which extends up on the parietal wall.

The type, Cat. No. 187009, U.S.N.M., comes from Port Alfred (Coll. No. 542). It has four post-nuclear whorls and measures: Length, 3.9 mm.; diameter, 1.5 mm. Cat. No. 250462, U.S.N.M., contains another specimen from the same locality (Coll. No. 1335).



**MANGILIA, species?**

Cat. No. 250472, U.S.N.M., contains two young shells of a slender *Mangilia* from Port Alfred, the nuclear whorls of which are very minutely, spirally striated; the succeeding turns provided with slender ribs and incised, spiral lines (Coll. No. 1345).

**MANGILIA, species?**

Cat. No. 19371, U.S.N.M., contains a worn specimen of a species different from any of the known species. It bears the label South Africa. It is too poor to be properly diagnosed.

**MANGILIA AMPLEXA Gould.**

Plate 2, fig. 10, plate 7, fig. 6.

*Clathurella amplexa* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 338, 1860.

Shell elongate-conic, white or cream-yellow. Nuclear whorls two and one-half, well rounded, smooth. Postnuclear whorls strongly rounded, provided with decidedly sinuous, strong, protractively slanting, almost sublamellar, axial ribs, of which 14 occur upon the first three and 12 upon the remaining whorls. These ribs are about one-third as wide as the spaces which separate them. In addition to the ribs, the whorls are marked by narrow, deeply incised, spiral sulci, which are about one-third as wide as the flat spaces that separate them. The increase in these sulci from the early whorls to the later takes place by the intercalation of new sulci in the flat spaces, which usually begin as fine incised striations. Of these sulci 6 occur upon the first, 10 upon the second, 17 upon the third, 14 upon the fourth, and 19 upon the penultimate whorl. Periphery of the last whorl well rounded. Base protracted, marked by the strong continuations of the axial ribs, which become evanescent at the insertion of the columella, and 23 incised spiral sulci, which are a little more distantly spaced on the columella than on the posterior half of the base. Aperture decidedly channeled anteriorly, posteriorly with a strong notch immediately below the suture. The type, Cat. No. 217 U.S.N.M., comes from Simons Bay. It has five post-nuclear whorls and measures: Length, 8 mm.; diameter, 2.5 mm. Another specimen, Cat. No. 187003, U.S.N.M., comes from Port Alfred (Coll. No. 535).

**MANGILIA HUMEROSA, new species.**

Plate 2, fig. 6.

Shell slender, semitransparent, white, with a slender band of bright rufous a little posterior to the periphery of each whorl and sometimes a second line of the same color immediately below the summit of the whorls. (Nuclear whorls decollated.) Postnuclear whorls rather high between the sutures, slightly shouldered a little

below the appressed summit, otherwise well rounded, marked by strong, narrow, somewhat sinuous, almost vertical axial ribs, of which 12 occur upon all the turns. Intercoastal spaces almost three times as wide as the ribs, crossed by 18 equal and almost equally spaced, strongly incised, spiral lines between the sutures. Periphery of the last whorl well rounded. Base attenuated, marked by the continuations of the axial ribs on the posterior half, and about 12 incised spirals, which equal those of the spire in strength and spacing. Aperture irregular, outer lip slightly reflected at the posterior angle to form a shallow notch, the rest decidedly inbent; columella somewhat sigmoid, covered by a thin callus which extends up on the parietal wall.

The type and one other specimen, Cat. No. 186688, U.S.N.M., were collected at Port Alfred (Coll. No. 46). It has lost the first nuclear whorl, the six remaining measure: Length, 6.6 mm.; diameter, 2.2 mm.

**MANGILIA PONSONBYI** Sowerby.

Cat. No. 186685, U.S.N.M., three specimens from Port Alfred (Coll. No. 41).

**MANGILIA**, species?

Cat. No. 250468, U.S.N.M., contains a young specimen from Port Alfred, which appears to be different from any of the species recorded from South Africa, but is too poor to serve as a basis for description (Coll. No. 1341).

**MANGILIA SIREN** Smith.

Cat. No. 186691, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 50). This was described as *Glyphostoma siren* Smith, but I believe it should range with *Mangilia*.

**Genus CYTHARA** Schumacher.

**CYTHARA ALFREDENSIS** Smith.

The United States National Museum has five lots of this species from Port Alfred. They are: Cat. No. 186689, eight specimens (Coll. No. 47). Cat. No. 227759, six specimens (Coll. No. 854). Cat. No. 227760, six specimens (Coll. No. 855). Cat. No. 252110, five specimens (Coll. No. 1603); and Cat. No. 252111, five specimens (Coll. No. 1604).

In addition to these, I have seen 44 of (Coll. No. 1603) and 45 of (Coll. No. 1604), which have been returned to Col. Turton.

**CYTHARA IMA**, new species.

Plate 3, fig. 1.

Shell white. Nuclear whorls two, smooth. Postnuclear whorls moderately rounded, with closely appressed summits marked by weak, depressed, rather broad, slightly protractive axial ribs, of

which 10 occur upon the first three whorls, 12 upon the fourth and penultimate. One of the ribs is decidedly thicker, forming a strong varix. This feature is common to all of our specimens. Intercostal spaces about twice as wide as the ribs and very shallow. In addition to the axial sculpture the entire surface of spire and base is marked by equal and almost equally spaced, closely placed, wavy, incised, spiral lines, of which about 24 occur between the sutures on the penultimate turn and about 30 upon the base of the last whorl. Sutures ill-defined. Aperture with the posterior angle acute; outer lip thick within, sharp at edge, sinus scarcely indicated a little distance anterior to the summit; columella almost straight, covered by a thin callus, which extends up on the parietal wall, forming a tubercle near the posterior angle.

The type, Cat. No. 117, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. It has eight whorls and measures: Length, 8.1 mm.; diameter, 3.5 mm. Cat. No. 186687, U.S.N.M., contains three additional specimens from Port Alfred (Coll. No. 45).

Genus *DAPHNELLA* Hinds.

*DAPHNELLA* ? *SULCATA* Sowerby.

Cat. No. 186690, U.S.N.M., one specimen from Port Alfred (Coll. No. 48).

*DAPHNELLA ALFREDENSIS*, new species.

Plate 8, fig. 3.

Shell spindle shaped, milk white, semitranslucent. Nuclear whorls decollated; post-nuclear whorls well rounded, appressed at the summit, marked by moderately strong, protractively curved, sinuous, axial ribs, of which 12 occur upon the first, 14 upon the second and third, and 18 upon the penultimate turn. These ribs are about as wide as the spaces which separate them. Intercostal spaces shallow, crossed by slender, equal and equally spaced, spiral threads, of which 6 occur upon the first, 7 upon the second, 12 upon the third, and 15 upon the last turn between the sutures. The appressed portion of the whorls appears to be free from spiral sculpture. Sutures feebly marked; periphery of the last whorl well rounded; base rather long; the posterior half well rounded and the anterior half somewhat concaved, marked by the feeble continuations of the axial ribs and spiral threads which equal those of the spire in strength and spacing. Aperture oval, strongly channeled anteriorly, posterior angle acute; outer lip thin, showing the external sculpture within; inner lip almost evenly concaved; parietal wall glazed with a thin callus.

The type, Cat. No. 227753, U.S.N.M., comes from Port Alfred (Coll. No. 848). It has five post-nuclear whorls, and measures: Length, 9.6 mm.; diameter, 4.5 mm.

Genus *DONOVANIA* Bucquoy, Dautzenberg, and Dollfus.

*DONOVANIA STIMPSONI*, new species.

Plate 3, fig. 3.

Shell brown. (Nuclear whorls decollated.) Post-nuclear whorls well rounded with appressed summits. Axial sculpture reduced to mere feeble indication of axial ribs. Spirally the whorls are marked by equal and almost equally spaced, incised lines, of which six occur between the sutures of the second and third, seven upon the fourth and the penultimate turn. Upon the base, which is but slightly attenuated, there are 10 incised spirals, those on the anterior extremity being a little closer spaced than the rest. Sutures well impressed. Aperture with the posterior angle acute; outer lip thin, sinus scarcely indicated a little distance below the summit; columella short, straight, covered by a thin callus which extends up on the parietal wall.

The type, Cat. No. 132, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at False Bay. It has six whorls and measures: Length, 5.4 mm.; diameter, 2.1 mm.

### Family CANCELLARIIDAE.

Genus *CANCELLARIA* Lamarck.

*CANCELLARIA FOVEOLATA* Sowerby.

Cat. No. 98016, U.S.N.M., one specimen from Peddie Coast, South Africa. Cat. No. 186701, U.S.N.M., three specimens from Port Alfred (Coll. No. 60).

*CANCELLARIA SEMIDISJUNCTA* Sowerby.

Cat. No. 186700, U.S.N.M., two specimens from Port Alfred (Coll. No. 59).

This was described by Sowerby<sup>1</sup> as having been obtained by Cum-  
ing from sandy mud at a depth of 25 fathoms at Cagayan, Mindanao,  
Philippine Islands.

The figures given correspond so well with the specimen above listed, and the fact that we did not secure this species in the Philippines during the *Albatross* expedition, makes me wonder if the above citation of locality may not be erroneous.

*CANCELLARIA DALLI*, new species.

Plate 4, fig. 2.

Shell irregularly oval, horn-yellow variegated with rusty spots. (Nuclear whorls decollated.) Post-nuclear whorls inflated, strongly rounded with broad tabulated summits, marked by numerous, slender,

<sup>1</sup> Proc. Zool. Soc. London, p. 137, 1848.

threadlike, retractive, axial riblets and spiral lirations. The spiral lirations are of varying strength. The strongest is at the angle of the shoulder and its junction with the axial riblets forms a series of sharp tubercles. Two other spirals, one at the periphery and another a little posterior to the middle between the angulated shoulder and the periphery, are of equal strength, and form weak tubercles at their juncture with the riblets. The flat summits of the whorls are marked by nine fine lirations, while the space between the angle and the strong supramedian liration is marked by one moderately strong thread followed by a weak one, which is succeeded by a stronger one and three slender threads. The space between the tuberculated median and peripheral cords is marked by three moderately strong lirations, which in turn are separated by finer raised threads. Periphery rendered slightly angulated by the cord. Base of the last whorl with a deep, moderately broad umbilicus, the space between the umbilical margin and the periphery well rounded, marked by six equal and equally spaced lirations which equal the median one of the spire in strength. These lirations, like those of the spire, are separated by finer ones, two of which usually occur in the space between them. Umbilicus marked by strong lines of growth and slender, crowded, equally developed, raised spiral threads. Aperture angulated pear-shaped; outer lip angular; columella strongly reflected, almost straight, provided with two strong oblique folds.

The type, Cat. No. 17074, U.S.N.M., has five post-nuclear whorls and measures: Length, 18 mm.; diameter, 13.4 mm.; greatest length of aperture, 11 mm.; greatest diameter of aperture, 8 mm.; width of shoulder immediately behind the aperture, 2 mm. The type comes from the Cape of Good Hope.

### Family OLIVIDAE.

#### Genus EBURNA Lamarck.

##### EBURNA PAPILLARIS Sowerby.

Cat. No. 227773, U.S.N.M., one specimen from Port Alfred (Coll. No. 868).

#### Genus ANCILLA Lamarck.

##### ANCILLA OBTUSA Swainson.

Cat. No. 227771, U.S.N.M., one specimen from Port Alfred (Coll. No. 866).

##### ANCILLA DECIPIENS Sowerby.

Cat. No. 163022, U.S.N.M., contains one specimen from Kowie, obtained from Sowerby and Fulton.

##### ANCILLA REEVEI Smith.

Cat. No. 186702, U.S.N.M., six specimens from Port Alfred (Coll. No. 62).



*ANCILLA ALBOZONATA* Smith.

Cat. No. 186706, U.S.N.M., four specimens from Port Alfred (Coll. No. 65).

*ANCILLA OBESA* Sowerby.

Cat. No. 98017, U.S.N.M., contains four specimens from Kowie, and Cat. No. 186703, U.S.N.M., six specimens from Port Alfred (Coll. No. 63).

*ANCILLA FASCIATA* Reeve.

Four lots of this species are in the collection of the United States National Museum, all from Port Alfred. They are: Cat. No. 186704, four specimens (Coll. No. 64). Cat. No. 249741, four specimens (Coll. No. 1013). Cat. No. 249742, three specimens (Coll. No. 1014). Cat. No. 249743, two specimens (Coll. No. 1015).

*ANCILLA MARMORATA* Reeve.

Cat. No. 186707, U.S.N.M., one specimen from Port Alfred (Coll. No. 66).

*ANCILLA PURA* Sowerby.

Cat. No. 187016, U.S.N.M., one specimen from Port Alfred (Coll. No. 550).

*ANCILLA BULLOIDES* Reeve.

Cat. No. 187015, U.S.N.M., four specimens from Port Alfred (Coll. No. 549).

*ANCILLA OSCULATA* Sowerby.

Cat. No. 187014, U.S.N.M., four specimens from Port Alfred (Coll. No. 548).

*ANCILLA*, species?

Cat. No. 250441, U.S.N.M., contains an exceedingly young specimen from Port Alfred (Coll. No. 1314).

Genus *SYLVANOCochlea* Sowerby.*SYLVANOCochlea ancilla* Sowerby.

Cat. No. 227772, U.S.N.M., one specimen from Port Alfred (Coll. No. 867).

*SYLVANOCochlea*, species?

Cat. No. 250440, U.S.N.M., contains a badly worn specimen of this genus, from Port Alfred, which is much broader and less elevated than the foregoing species; (Coll. No. 1313).

## Family MARGINELLIDAE.

Genus *MARGINELLA* Lamarck.*MARGINELLA PYRUM* Gronovius.

Three lots of this species all from Port Alfred, are in the collection of the United States National Museum. Cat. No. 186980, three specimens (Coll. No. 512). Cat. No. 186983, two specimens (Coll. No. 515); and two specimens, Cat. No. 249666 (Coll. No. 938).

*MARGINELLA ROSEA* Lamarck.

Cat. No. 140, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 17296, U.S.N.M., two more from the same locality. Cat. No. 186984, U.S.N.M., two from Port Alfred (Coll. No. 516).

*MARGINELLA MOSAICA* Sowerby.

Cat. No. 124681, U.S.N.M., one specimen from Cape of Good Hope. Cat. No. 186709, U.S.N.M., two from Port Alfred (Coll. No. 168).

*MARGINELLA ORNATA* Redfield.

Cat. No. 186708, U.S.N.M., one specimen from Port Alfred (Coll. No. 67).

*MARGINELLA*, species?

Cat. No. 250329, U.S.N.M., one poor specimen from Port Alfred (Coll. No. 1202).

*MARGINELLA LINEOLATA* Sowerby.

Cat. No. 186981, U.S.N.M., three specimens from Port Alfred (Coll. No. 513). One, Cat. No. 186982, U.S.N.M., from the same locality (Coll. No. 514).

*MARGINELLA PIPERITA* Hinds.

Cat. No. 124671, U.S.N.M., two specimens from Cape of Good Hope. Cat. No. 186710, U.S.N.M., four from Port Alfred (Coll. No. 69). Cat. No. 272145, U.S.N.M., three specimens from Port Elizabeth.

*MARGINELLA ALBOCINCTA* Sowerby.

Four lots of this species are in the collection of the United States National Museum, all from Port Alfred. One, Cat. No. 186712 (Coll. No. 71). Two, Cat. No. 249667 (Coll. No. 939). Two, Cat. No. 250323 (Coll. No. 1196). One, Cat. No. 250328 (Coll. No. 1201). Cat. No. 272147, U.S.N.M., four specimens from Port Elizabeth.

*MARGINELLA BAIRSTOWI* Sowerby.

Cat. No. 186711, U.S.N.M., four from Port Alfred (Coll. No. 70).

*MARGINELLA PUNCTILINEATA* Smith.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred. Three specimens, Cat. No. 186713 (Coll. No. 72). Two, Cat. No. 249669 (Coll. No. 941), and one, Cat. No. 250327 (Coll. No. 1200).

*MARGINELLA KEENII* Murrat.

Cat. No. 186716, U.S.N.M., two from Port Alfred (Coll. No. 75).

*MARGINELLA EUCOSMIA*, new species.

Plate 1, fig. 11.

Shell of medium size, marbled, excepting a broad whitish band which extends over almost half the space between the shoulder and the base. Whorls appressed at the summit, forming a very slightly curved spire. Body of the last whorl very slightly convex. Outer lip very much thickened at the edge, shouldered at the summit, very slightly contracted in the middle, white or faintly spirally streaked in front, decidedly so behind; columella provided with a strong callus and four folds, the anterior two of which are much more oblique than the rest; the first one is the weakest, and forms the basal margin of the columella.

The type, Cat. No. 186986, U.S.N.M., comes from Port Alfred (Coll. No. 518); it has  $4\frac{1}{2}$  whorls and measures: Length, 12.5 mm.; diameter, 6 mm.

Two additional lots, from Port Alfred, are in the collection of the United States National Museum. One, Cat. No. 186987, U.S.N.M., four specimens (Coll. No. 519), and Cat. No. 186985, U.S.N.M., three specimens (Coll. No. 517).

*MARGINELLA*, species?

Cat. No. 186986a, U.S.N.M., contains a specimen about the size of *M. eucosmia*, but a little stouter, with fine brown spiral lines upon a white background. The specimen is too worn to permit of proper diagnosis. It comes from Port Alfred (Coll. No. 518).

*MARGINELLA COSMIA*, new species.

Plate 21, fig. 2.

Shell of medium size, polished, marked only by fine lines of growth. Spire moderately elevated; whorls slightly angulated at the periphery. Summits of succeeding turns creeping up on the preceding whorl, to which they are appressed. Nuclear whorls light yellow, succeeding turns flesh color, marked with many irregular, wavy, axial bands of brown, which are preceded by a shadow of a much lighter tint. Aperture wide; posterior angle very obtuse; outer lip very much thickened, clouded with many oval spots of ashy gray, the long axis of which is spirally disposed; columella smoky white, provided with four almost equally strong oblique folds; parietal wall covered by a moderately thick callus.

The type and two specimens, Cat. No. 249668, U.S.N.M., come from Port Alfred (Coll. No. 940). The type measures: Length, 11.7 mm.; diameter, 6.8 mm. Cat. No. 186988, U.S.N.M., contains two more from the same locality (Coll. No. 520).

**MARGINELLA, species?**

A young specimen, Cat. No. 250326, U.S.N.M., from Port Alfred (Coll. No. 1199), of a more or less uniform pearl gray ground color, with an interrupted band of spots on the middle and spotting on the spire, which we are unable to arrange with any of the described forms.

**MARGINELLA MUNDA** Smith.

Cat. No. 186726, U.S.N.M., two from Port Alfred (Coll. No. 85).

**MARGINELLA ZONATA** Kiener.

There are three color phases in the material before us, typical *zonata* with the broad belt of brownish orange of which Cat. No. 186715, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 74) and Cat. No. 227710, eight specimens from the same locality (Coll. No. 805). We have also seen 92 specimens of this in Colonel Turton's collection (Coll. No. 1600), from the same place. Then, a form in which the markings are reversed—namely, a white belt with the tip and base brownish orange. Of this, Cat. No. 186715*a*, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 74) and Cat. No. 227712, eight specimens from the same locality (Coll. No. 807). Of this, I have also seen 66 specimens in Colonel Turton's collection (Coll. No. 1602). Lastly, a phase in which the brownish orange is restricted to a very narrow subsutural band. Of this, Cat. No. 186724, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 83), and Cat. No. 227711, U.S.N.M., eight specimens from the same source (Coll. No. 806). Ninety-three more were examined Colonel Turton's collection from the same place (Coll. No. 1601).

**MARGINELLA BILINEATA** Krauss.

Cat. No. 127, U.S.N.M., one specimen collected by William Stimpson at Simons Bay on the North Pacific Exploring Expedition. Cat. No. 186989, U.S.N.M., three from Port Alfred (Coll. No. 521).

**MARGINELLA CAPENSIS** Krauss.

Cat. No. 149, U.S.N.M., five specimens collected by William Stimpson at Simons Bay, on the North Pacific Exploring Expedition. Cat. No. 17305, U.S.N.M., three specimens from Cape of Good Hope. Cat. No. 31661, U.S.N.M., four from the same locality. Cat. No. 272146, U.S.N.M., five specimens from the Cape of Good Hope.

**MARGINELLA PUELLA** Gould.

Plate 1, fig. 1.

*Marginella puella* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 385, 1860.

Shell yellowish-white, polished, spire moderately elevated, broadly conic. Left outline evenly rounded. Inner lip well rounded, slightly concaved at the region of the folds, of which there are four, which

appear equal and equally spaced, the anterior one forming the anterior limit of the columella. Outer lip slightly pinched in and drawn forward a little posterior to the middle. Aperture increasing steadily in width from the posterior angle anteriorly.

The type, Cat. No. 149, U.S.N.M., collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, measures: Length, 10 mm.; diameter, 4.6 mm.

**MARGINELLA NEGLECTA** Sowerby.

Plate 1, fig. 7.

Four lots of this species are in the collection of the United States National Museum. Cat. No. 24100*b*, one specimen from Simons Bay, Cape of Good Hope. Three additional lots are in the United States National Museum, from Port Alfred. One, Cat. No. 250333 (Coll. No. 1206). Two specimens, Cat. No. 250332 (Coll. No. 1205), and one specimen, Cat. No. 186714*a* (Coll. No. 73).

**MARGINELLA TURTONI**, new species.

Plate 1, fig. 3.

Shell vitreous, translucent, pale yellow with a narrow, pale orange brown band forming a girdle about the middle of the shell. Spire completely covered by the posterior edge of the outer lip, which forms the highest point in all the turns. Left margin of the last whorl slightly rounded in the middle, tapering gently toward the base, rounding abruptly toward the summit. Right margin straight in the middle, curving a little more gently toward the spire than the base. Aperture narrow, extending to the middle of the spire; outer lip moderately strong, slightly inbent in the middle; parietal wall glazed with a thin callus, provided with four, equal and equally sloping, oblique folds on the columella, the anterior of which coincides with the basal margin of the columella.

The type and three specimens, Cat. No. 186718, U.S.N.M., come from Port Alfred (Coll. No. 77). The type measures: Length, 8.5 mm.; diameter, 4.0 mm.

**MARGINELLA CLEO**, new species.

Plate 1, fig. 6.

Shell elongate-ovate, semitranslucent, vitreous, bluish white. Spire short, broadly conic, whorls not separated by distinct sutures. Left margin of the shell gently rounded; aperture narrow; outer lip inbent in the middle; parietal wall covered by a thin callus; columella provided with four oblique folds, of which the anterior, which bounds the basal edge, is the strongest.



The type, Cat. No. 127*a*, U.S.N.M., has four whorls and measures: Length, 6.8 mm., diameter, 3.5 mm. It was collected by William Stimpson on the North Pacific Exploring Expedition in Simons Bay.

This may be the shell that has been listed as *Marginella bulbosa* Reeve, from South Africa. *M. bulbosa* Reeve is an inflated form with less elevated spire and comes from Borneo. Cat. No. 17307, U.S.N.M., comes from Cape of Good Hope. Three additional lots, all from Port Alfred, are in the collection of the United States National Museum. Two, Cat. No. 249670 (Coll. No. 942). One, Cat. No. 250331 (Coll. No. 1204), and one, Cat. No. 250324 (Coll. No. 1197).

**MARGINELLA CYLINDRICA** Sowerby.

Cat. No. 186721, U.S.N.M., one specimen from Port Alfred (Coll. No. 80). Cat. No. 250325, U.S.N.M., one specimen from the same locality (Coll. No. 1198).

**MARGINELLA FALLAX** Smith.

Cat. No. 186723, U.S.N.M., three specimens from Port Alfred (Coll. No. 82).

**MARGINELLA LEPTA**, new species.

Plate 21, fig. 3.

Shell elongate-oval, semitransparent, white. Spire short, broadly conic. Suture well impressed. Surface polished, marked only by exceedingly fine lines of growth. Aperture gradually increasing in width from the posterior angle anteriorly; outer lip thin, not denticulated. Columella curved, with a moderately thick callus which is provided with six oblique folds, the second of which is the strongest, the first follows in succession of strength and borders the anterior edge of the columella; the four remaining decrease in size and spacing from the third to sixth.

Two specimens of this species, Cat. No. 249673, U.S.N.M., come from Port Alfred. (Coll. No. 945.) One of these, the type, measures: Length, 5.1 mm.; diameter, 2.6 mm.

**MARGINELLA DULCIS** Smith.

Cat. No. 186725, U.S.N.M., five specimens from Port Alfred (Coll. No. 84).

**MARGINELLA BURNUPI** Sowerby.

Cat. No. 186719, U.S.N.M., three specimens from Port Alfred (Coll. No. 78). Cat. No. 249671, U.S.N.M., contains another specimen from the same place (Coll. No. 943).

**MARGINELLA DIFFERENS** Smith.

Cat. No. 186720, U.S.N.M., three specimens from Port Alfred (Coll. No. 79).

*MARGINELLA*, species?

Cat. No. 250321, U.S.N.M., contains a young white individual, of moderate size, broad outline, and quadruplicate columella, which we are unable to refer to any of the known species. Port Alfred (Coll. No. 1194).

*MARGINELLA ALFREDENSIS*, new species.

Plate 1, fig. 2; plate 10, fig. 4.

Shell elongate-ovate, bluish white, semitranslucent. The whorls are so arranged as to overlap partly at the summit, which gives the summit a broadly, evenly rounded aspect. The left margin of the shell is well rounded. The outer lip is flattened in the middle, curving gently toward the summit above this, and a little more abruptly basally. Aperture narrow, lunate, a little wider basally than anteriorly; outer lip thickened at the edge; inner lip appressed to the body whorl, with a thin callus, the basal portion of which terminates in a slender fasciole. The inner lip is armed with eight subequally spaced folds which diminish in size from the first, which equals the basal fasciole in strength, to the last.

The type and three specimens of this species, Cat. No. 186727, U.S.N.M., come from Port Alfred (Coll. No. 86). The type has four and one-half whorls and measures: Length, 2.5 mm.; diameter, 1.7 mm. Eight additional lots of this species, all from Port Alfred, are in the collection of the United States National Museum. Cat. No. 186990, six specimens (Coll. No. 522); Cat. No. 250338, three specimens (Coll. No. 1211); Cat. No. 250340, one specimen (Coll. No. 1213); Cat. No. 250341, 11 specimens (Coll. No. 1214); Cat. No. 250339, one specimen (Coll. No. 1212); Cat. No. 250337, one specimen (Coll. No. 1210); Cat. No. 250344, one specimen (Coll. No. 1217); Cat. No. 250342, 12 specimens (Coll. No. 1215).

*MARGINELLA ALGOENSIS* Smith.

Five lots of this species are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 186722, four specimens (Coll. No. 81). Cat. No. 249665, three specimens (Coll. No. 937); Cat. No. 249664, six specimens (Coll. No. 936); Cat. No. 250335, two specimens (Coll. No. 1208); Cat. No. 250336, one specimen (Coll. No. 1209).

*MARGINELLA ALMO*, new species.

Plate 21, fig. 1.

Shell ovate, semitranslucent, milk white. Spire short, broadly, roundedly conic. Suture slightly impressed. Surface marked with exceedingly fine lines of growth only. Aperture very long, widening somewhat anteriorly; outer lip thickened at the edge and very finely denticulated on the inner margin, the denticulations extending

inward as fine lirations; columella reenforced with a strong callus, which is provided with oblique folds; of these, the first, which is a little weaker than the next, marks the anterior border; the second is stronger than all the rest; the nine succeeding folds are progressively weaker and become closer spaced from the second fold posteriorly.

Two specimens of this species, Cat. No. 249672, U.S.N.M., come from Port Alfred (Coll. No. 944). One of these, the type, measures: Length, 5.4 mm.; diameter, 3.2 mm.

**MARGINELLA ZEYHERI** Krauss.

Four lots of this species are in the collection of the United States National Museum; three of these came from Port Alfred. Cat. No. 186717, six specimens (Coll. No. 76); Cat. No. 186714, two specimens (Coll. No. 73); Cat. No. 250334, three specimens (Coll. No. 1207); Cat. No. 102727, one specimen from the Cape of Good Hope.

**MARGINELLA**, species?

Cat. No. 250343, U.S.N.M., contains two young specimens of *Margi-nella*, from Port Alfred (Coll. No. 1216). They are too young to be positively determined.

Cat. No. 250330, U.S.N.M., contains one young specimen of *Margi-nella*, too young to be properly placed, from Port Alfred (Coll. No. 1203).

Cat. No. 250480, U.S.N.M., contains a young *Marginella* from Port Alfred, also too young to be properly placed (Coll. No. 1353).

Family **VOLUTIDAE**.

Genus **VOLUTA** Linnaeus

**VOLUTA AFRICANA** Reeve.

Cat. No. 186728, U.S.N.M., one from Port Alfred (Coll. No. 87).

**VOLUTA (CALLIPARA) BULLATA** Swainson.

Cat. No. 249663, U.S.N.M., contains a badly worn specimen of this species from Port Alfred (Coll. No. 935).

Family **TURBINELLIDAE**.

Genus **XANCUS** Bolten.

**XANCUS GLOBULUS** Chemnitz.

Cat. No. 124677, U.S.N.M., one from Cape of Good Hope.

**XANCUS TRUNCATUS** Sowerby.

Cat. No. 186979, U.S.N.M., a young specimen from Port Alfred (Coll. No. 511).

## Family MITRIDAE.

## Genus MITRA Martyn.

## MITRA BATHYRAPHE Sowerby.

Two, Cat. No. 186736, U.S.N.M., from Port Alfred (Coll. No. 95).

## MITRA CANALICULATA Sowerby. \*

Cat. No. 186734, U.S.N.M., three, from Port Alfred (Coll. No. 93).

Cat. No. 272158, U.S.N.M., two from Kowie, South Africa.

## MITRA CAPENSIS Dunker.

Cat. No. 186733, U.S.N.M., five, from Port Alfred (Coll. No. 92).

Cat. No. 272159, U.S.N.M., two from Kowie, South Africa.

## MITRA HELENA, new species.

Shell small, wax-yellow, with two bands of white, the first of which occupies a little more than the anterior half between the sutures, while the second one, which is about half as wide, occupies the middle of the base. Nuclear whorls decollated. Postnuclear whorls shouldered at the summit, marked by very strong, slightly retractive, axial ribs, of which 16 occur upon the first of the remaining turns, 20 on the second, and 16 upon the rest. In addition to the axial ribs, the whorls are crossed by strong spiral cords, of which five occur between the sutures of the first three and seven upon the fourth and last. The spaces inclosed between the axial ribs and spiral cords are deep pits on the posterior half and deep slits on the anterior half between the sutures. Base rendered decidedly sigmoid on the left side by the twisting of the anterior portion; marked by the continuations of the axial ribs which extend to the tip of the columella, and 10 spiral cords, of which the 6 posterior to the columella are like those on the spire, while the first 2 on the columella are broader and stronger and more rounded, the last two on the anterior end weaker. Suture well impressed. Aperture narrow, channeled anteriorly; posterior angle acute; outer lip marked by 12, slender, spiral lirations within; columella provided with four oblique folds, which decrease regularly in size from the posterior to the anterior; they also become more oblique in the same order.

The type and another specimen, Cat. No. 272156, U.S.N.M., come from South Africa. The type has 6 whorls remaining and measures: Length, 15 mm.; diameter, 6.6 mm. These specimens came to the United States National Museum, labelled "*Mitra daedala*, Reeve," in a donation by Mr. John B. Henderson, in a collection purchased from Sowerby and Fulton. *Mitra daedala* of Reeve is a Philippine species, which we have from the islands; it is much larger than the present species.

*MITRA IMA*, new species.

Plate 21, fig. 4.

Shell small, cylindro-conic, pale brown, variegated with whitish spots and spots of rust color. Nuclear whorls decollated, the succeeding turns well rounded, slightly shouldered at the summit, crossed by obsolete axial ribs, of which 12 occur upon the first to third and 14 upon the penultimate whorl. Sutures well marked. Periphery of the last whorl well rounded. Base prolonged, well rounded, free of all sculpture. Aperture channeled anteriorly; posterior angle acute; outer lip moderately thick; columella provided with four oblique folds, of which the posterior is the strongest, the others decreasing in size consecutively; parietal wall covered with a moderately thick callus. The color markings consist of a light brown ground color, each whorl of the spire being marked with two interrupted bands of white, the first of which is on the middle of the whorl, and the second immediately posterior to the suture. The white areas are on the middle of the ribs and each white area is bounded on all sides with a rust-colored edging in the middle subsutural band. This rust color is absent at the posterior margin, while the ground color of the whole base is made up of this tint. The base, in addition, is marked with four interrupted bands of unequal width and unequal spacing of whitish spots.

The type, Cat. No. 250346, U.S.N.M., comes from Port Alfred (Coll. No. 1219). It has four postnuclear whorls, and measures: Length, 9 mm.; diameter, 4 mm.

*MITRA EUZONATA* Sowerby.

Cat. No. 186735, U.S.N.M., two specimens from Port Alfred (Coll. No. 94).

*MITRA KOWIENSIS* Sowerby.

Cat. No. 186737, U.S.N.M., five specimens from Port Alfred (Coll. No. 96).

Cat. No. 272155, U.S.N.M., two from Kowie, South Africa.

*MITRA LATRUNCULARIA* Reeve.

Cat. No. 98011, U.S.N.M., six specimens from Albany, South Africa. Cat. No. 186730, U.S.N.M., one from Port Alfred (Coll. No. 89).

*MITRA CARIFA*, new species.

Shell rather large, elongate-ovate, brown, excepting two spiral cords that form the anterior half of the whorls between the sutures, which are yellow. Nuclear whorls decollated. Postnuclear whorls narrowly, roundly shouldered at the summit, the rest marked by four strong, broad, flattened, spiral cords between the sutures, which



in turn are marked by spiral lirations. The axial sculpture consists of fine, retractive threads, which are best developed in the grooves that separate the spiral cords. Suture slightly channeled. Periphery not markedly differentiated. Base rather long, marked by 18 low, feebly rounded, spiral cords, which become more distantly spaced, more elevated, and narrower anteriorly. These cords are crossed by microscopic spiral lirations. The axial threads are continued on the base. A varix is apparent a little behind the aperture. Aperture bluish white, narrowly ovate, channeled anteriorly, posterior angle acute; outer lip reflected, provided with 14 strong denticles; inner lip strongly developed, reflected over the base with the edge free; provided with five strong, oblique folds and three weaker ones between the posterior four. These weaker folds join the posterior strong neighbor at their outer edge. The strong folds decrease in strength successively from the posterior anteriorly. Parietal wall glazed by a thin callus.

The type and another specimen, Cat. No. 272154, U.S.N.M., came to the United States National Museum in a donation from Mr. John B. Henderson, in a collection purchased by him from Sowerby and Fulton, labelled: "*Mitra limbifera* Lamareck, from South Africa," while the pages of this paper were going through press. I am therefore unable to include a figure of it. It differs from *limbifera* by being much more strongly sculptured than that species, also in the number of the columellar plaits. The type has eight whorls, and measures: Length, 29.4 mm.; diameter, 12.4 mm.

**MITRA MERULA** Sowerby.

Cat. No. 186732, U.S.N.M., four specimens from Port Alfred (Coll. No. 91).

**MITRA SIMPLEX** Reeve.

Cat. No. 31901, U.S.N.M., one specimen from Cape of Good Hope. Cat. No. 13925, U.S.N.M., another from the same place. Cat. No. 98012, U.S.N.M., five from Albany, South Africa.

Cat. No. 272157, U.S.N.M., an additional specimen from South Africa.

**MITRA, species?**

Cat. No. 250345, U.S.N.M., contains two badly worn specimens of a medium sized, short, stout, brown species, from Port Alfred, which I am unable to refer to any of the known species (Coll. No. 1218).

**MITRA PATULA** Reeve.

Cat. No. 186731, U.S.N.M., eight specimens from Port Alfred (Coll. No. 90).

**MITRA PICTA** Reeve.

Cat. No. 186729, U.S.N.M., three specimens from Port Alfred (Coll. No. 88). Cat. No. 186975, U.S.N.M., two from Port Alfred (Coll. No. 507). Cat. No. 272153, two from South Africa.

## MITRA, species?

Cat. No. 18252, U.S.N.M., three shells too young to be positively determined, from South Africa.

Genus MITROMORPHA A. Adams.

## MITROMORPHA VOLVA Sowerby.

Cat. No. 186692, U.S.N.M., three specimens from Port Alfred (Coll. No. 51). Cat. No. 272152, U.S.N.M., an additional specimen from South Africa.

## Family FASCIOLARIIDAE.

Genus FASCIOLARIA Lamarck.

## FASCIOLARIA HEYNEMANNI Dunker.

Cat. No. 186738, U.S.N.M., one specimen from Port Alfred (Coll. No. 97).

## FASCIOLARIA ALFREDENSIS, new species.

Plate 4, fig. 3, 3a, 3b.

Shell of medium size, fusiform, externally light brown, internally bluish-white. Nuclear whorls decollated. Post-nuclear whorls marked by a strongly tuberculated median ridge between the sutures. Tubercles, 11 on each whorl, narrow and elongated, having their long axis parallel with the spiral sculpture. The space between the tuberculated ridge and the summit is concave and is marked by many slender raised threads, while that between the insertion of the columella and the tuberculated ridge is marked by about 10 depressed, unequally broad, spiral bands, which, like the spaces between them, are very finely, spirally lirate; rostrum spirally lirate. The axial sculpture consists of rather coarse incremental lines. Aperture spoon-shaped; posterior angle acute; columella triplicate; anterior fold very strong and acute; spiral cord on the parietal wall slender.

The type, Cat. No. 187026, U.S.N.M., comes from Port Alfred (Coll. No. 562). It has lost the early whorls, the  $5\frac{1}{2}$  remaining measure: Length, 133 mm.; diameter, 55 mm.

## FASCIOLARIA, species?

Two specimens from Port Alfred, too poor to be specifically determined, and listed as Cat. No. 187027, U.S.N.M. (Coll. No. 563), and Cat. No. 250438, U.S.N.M. (Coll. No. 1311).

Genus LATIRUS Montfort.

## LATIRUS ROUSI Sowerby.

Cat. No. 186739, U.S.N.M., one specimen from Port Alfred (Coll. No. 98).

**LATIRUS BAIRSTOWI** Sowerby.

Cat. No. 186740, U.S.N.M., one specimen from Port Alfred (Coll. No. 99).

Family **FUSIDAE**.Genus **FUSINUS** Rafinesque.**FUSINUS OCELLIFERUS** Born.

Cat. No. 98014, U.S.N.M., two specimens from Albany; Cat. No. 186741, U.S.N.M., one from Port Alfred (Coll. No. 100).

**FUSINUS CINGULATUS** Smith.

Cat. No. 186742, U.S.N.M., two specimens from Port Alfred (Coll. No. 101).

**FUSINUS RUBROLINEATUS** Sowerby.

Cat. No. 163018 U.S.N.M., one specimen from 90 fathoms, off Cape St. Blaize.

Family **BUCCINIDAE**.Genus **COMINELLA** Gray.**COMINELLA TIGRINA** Kiener.

Cat. No. 16990, U.S.N.M., two specimens collected by Archer at Cape of Good Hope. Cat. No. 186745, U.S.N.M., three from Port Alfred (Coll. No. 104). Cat. No. 272134, U.S.N.M., three from the Cape of Good Hope.

**COMINELLA BISERIALIS** Kuster.

Cat. No. 36726, U.S.N.M., six from Cape of Good Hope. Cat. No. 43053, U.S.N.M., two from the same locality.

**COMINELLA PORCATA** Gmelin.

Cat. No. 90, U.S.N.M., one collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 179, U.S.N.M., one from the same source. Cat. No. 36729, U.S.N.M., one from Cape of Good Hope. Cat. No. 87127, U.S.N.M., two from Cape of Good Hope collected by W. Legrande. Cat. No. 186746, U.S.N.M., one from Port Alfred (Coll. No. 105).

**COMINELLA PORCATA MULTILIRATA**, new subspecies.

Plate 4, fig. 6.

Shell a little more robust than typical *porcata* in outline, marked by numerous closely spaced spiral threads. Inside of outer lip evenly, closely, finely lirate.

The type, Cat. No. 16986, U.S.N.M., comes from Cape of Good Hope and measures: Length, 47.5 mm.; diameter, 28.3 mm.

*COMINELLA ANGLICANA* Martyn.

Cat. No. 90*b*, U.S.N.M., one collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 36727, U.S.N.M., one from Cape of Good Hope.

*COMINELLA PAPYRACEA* Bruguiere.

Cat. No. 16989, U.S.N.M., seven collected by Hugh Cuming at Cape of Good Hope. Cat. No. 130898, U.S.N.M., one from South Africa without specific locality. Cat. No. 250451, U.S.N.M., two young specimens from Port Alfred (Coll. No. 1324).

*COMINELLA LIMBOSA* Reeve.

Cat. No. 90*a*, U.S.N.M., two collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 92, U.S.N.M., four collected by Archer at Cape of Good Hope. Cat. No. 98000*a*, U.S.N.M., four from the Albany coast. Cat. No. 125326, U.S.N.M., one collected on the Eclipse Expedition, 1889-90, at Cape Town. Cat. No. 272136, U.S.N.M., two from the Cape of Good Hope.

*COMINELLA LAGENARIA* Lamarck.

Cat. No. 90, U.S.N.M., two collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 16990*a*, U.S.N.M., two collected by Captain Archer at Cape of Good Hope. Cat. No. 36728, U.S.N.M., six from Cape of Good Hope. Cat. No. 43063, U.S.N.M., eight young shells from Cape of Good Hope. Cat. No. 75929, U.S.N.M., one from Algoa Bay. Cat. No. 98000, U.S.N.M., one from the Albany coast. Cat. No. 186744, U.S.N.M., one from Port Alfred (Coll. No. 103).

*COMINELLA DELALANDI* Kiener.

Cat. No. 92*a*, U.S.N.M., one collected by Captain Archer at Cape of Good Hope. Cat. No. 89125, U.S.N.M., three specimens from Cape of Good Hope. Cat. No. 89126, U.S.N.M., two from the same place. Cat. 98025, U.S.N.M., six from the Albany coast.

*COMINELLA ELONGATA* Dunker.

Cat. No. 186747, U.S.N.M., 10 from Port Alfred (Coll. No. 106). Cat. No. 272138, U.S.N.M., one from Algoa Bay.

*COMINELLA ALFREDENSIS*, new species.

Plate 3, fig. 7.

Shell fusiform, flesh-colored, variously mottled and dashed with brown. Nuclear whorls decollated. Post-nuclear whorls having a sloping shoulder which extends over the posterior three-fifths of the whorls between the sutures, marked by weak axial ribs, which are best developed at the anterior edge of the shoulder and extend but feebly across it; anteriorly the ribs become much enfeebled,

13 ribs occur upon the last and 14 upon the preceding turn. The spiral sculpture consists of 10 irregularly developed, low, broad cords, of which the three on the shoulder are almost obsolete and scarcely discernible; while the four upon the base are fairly strong. In addition to these cords the entire surface is marked by fine more or less regularly developed, punctate, spiral striations. Posterior angle of aperture acute, outer lip provided with nine slender denticles a little within its inner margin; columella glazed with a moderately strong callus; parietal lamellae only slightly developed.

The type and two specimens, Cat. No. 187019, U.S.N.M., were collected at Port Alfred (Coll. No. 554). The type has lost the early whorls; the last four remaining measure: Length, 29.2 mm.; diameter, 15 mm.

*COMINELLA CAPENSIS* Dunker.

Cat. No. 184, U.S.N.M., three specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay.

*COMINELLA UNIFASCIATA* Sowerby.

Cat. No. 186748, U.S.N.M., four specimens from Port Alfred (Coll. No. 107).

*COMINELLA PUNCTURATA* Sowerby.

Cat. No. 19375, U.S.N.M., three specimens from Cape of Good Hope. Cat. No. 43074, U.S.N.M., two more from the same locality. Cat. No. 186749, U.S.N.M., five from Port Alfred (Coll. No. 108). Cat. No. 127769, U.S.N.M., six specimens from the same locality (Coll. No. 864). Cat. No. 227770, U.S.N.M., six specimens from the same source (Coll. No. 865).

*COMINELLA ANGUSTA* Sowerby.

Cat. No. 186751, U.S.N.M., two from Port Alfred (Coll. No. 110).

*COMINELLA*, species ?

Cat. No. 16992, U.S.N.M., four specimens too poor to be specifically determined from the Cape of Good Hope.

*COMINELLA*, species ?

Cat. No. 18807, U.S.N.M., three specimens from Port Elizabeth which are too poor to be specifically determined.

*COMINELLA*, species ?

Cat. No. 187021, U.S.N.M., two specimens from Port Alfred, too poor to permit of specific determination. Cat. No. 249745, U.S.N.M., contains three specimens from the same source (Coll. No. 1017).

Genus *TRITONIDEA* Swainson.

*TRITONIDEA INSCULPTA* Sowerby.

Cat. No. 186752, U.S.N.M., three specimens from Port Alfred (Coll. No. 111).



Genus *EUTHRIA* Gray.*EUTHRIA PONSONBYI* Sowerby.

Cat. No. 187018, U.S.N.M., two specimens from Port Alfred (Coll. No. 552).

*EUTHRIA FUSCOTINCTA* Sowerby.

Cat. No. 186753, U.S.N.M., four specimens from Port Alfred (Coll. No. 112).

*EUTHRIA TURTONI*, new species.

Plate 3, fig. 6.

Shell fusiform, varying in ground color from lavender to orange or even light brown. The shoulder usually is dark brown, while the rest is lightly dotted with the same color. Extreme apex of nucleus decollated; the first turn remaining is depressed and smooth. Postnuclear whorls appressed at the summit, strongly, slopingly shouldered. The shoulder, occupying the posterior half of the space between the sutures, is marked by about fifteen unequally developed and unequally spaced, punctate, spiral striations. Anterior half of whorls between the sutures ornamented with feebly expressed, low, broad riblets, which terminate at the anterior edge of the shoulder, where they appear as slight tubercles. Of these, 17 occur upon the last turn. Rostrum and posterior half of base finely, evenly, spirally lirate, the lirations being developed at the insertion of the columella. Posterior angle of aperture acute; columella sigmoid.

The type, Cat. No. 187020, U.S.N.M., came from Port Alfred (Coll. No. 555). It has six whorls, and measures: Length, 25 mm.; diameter, 11.5 mm. Cat. No. 186750, U.S.N.M., contains three additional specimens from the same locality (Coll. No. 109).

## Family COLUBRARIIDAE.

Genus *COLUBRARIA* Schumacher.*COLUBRARIA ALFREDENSIS*, new species.

Plate 4, fig. 5.

Shell elongate-conic, white, banded and lined with rust brown. A series of short protractive streaks extend from the summit down on the posterior fourth of the whorls. The streaks are about one-half as wide as the spaces separating them. A spiral line of interrupted dashes extends about the whorls a little posterior to the sutures, while a broad dull rusty belt covers the anterior half between the sutures and another, equally wide, the middle of the base. In addition to these decided markings there are others less strongly defined, all of varying shades of rust brown. Nuclear whorls decollated. Postnuclear whorls moderately rounded, appressed at the summit and slightly constricted at the sutures, marked by low, poorly defined, and irregu-

larly placed varices and many, very regular, and regularly, closely spaced, slender, raised, axial threads which are about as wide as the spaces that separate them. Spirally the whorls are marked by about 16 slender threads, between the sutures, which are a little less strong than the axial markings and also less regular. The spaces inclosed between the axial and spiral threads appear as narrow oblong pits whose long diameter coincides with the spiral sculpture. Sutures well impressed. Periphery of the last whorl well rounded. Base prolonged, marked like the spire but not as strongly. Aperture strongly channeled anteriorly, posterior angle narrow, obtuse; outer lip thickened by a varix, columella sinuous, covered by a strong, decidedly reflected callus which extends up on the parietal wall.

The type and one other specimen, Cat. No. 187017, U.S.N.M., came from Port Alfred (Coll. No. 551). The type has the last six whorls which measure: Length, 33.5 mm.; diameter, 11.5 mm.

### Family ALECTRIONIDAE.

#### Genus ALECTRION Montfort.

##### ALECTRION CAPENSIS Dunker.

The United States National Museum has ten lots of this species, Cat. No. 18164, five specimens from Cape of Good Hope, Cat. No. 21756, one collected by Dunker at Algoa Bay. Cat. No. 43022, nine specimens from Cape of Good Hope. Cat. No. 77793, nine from the same locality collected by Layard. Cat. No. 90609, two from Cape of Good Hope. Cat. No. 91459, six from the same place. Cat. No. 98013, twelve from Albany. Cat. No. 186755, three from Port Alfred (Coll. No. 116). Cat. No. 186759, one from the same place (Coll. No. 120). Cat. No. 187196, one from the same locality (Coll. No. 65). Cat. No. 272121 U.S.N.M., two specimens from South Africa.

##### ALECTRION CRAWFORDI Sowerby.

Cat. No. 186754, U.S.N.M., two from Port Alfred (Coll. No. 115).

##### ALECTRION KOCHIANA Dunker.

Cat. No. 21757, U.S.N.M., one specimen collected by Dunker in Algoa Bay. Cat. No. 227764, U.S.N.M., five specimens from Port Alfred (Coll. No. 859), and Cat. No. 227765, U.S.N.M., two specimens from the same locality (Coll. No. 860), and Cat. No. 250453, U.S.N.M., two from the same place (Coll. No. 1326).

##### ALECTRION QUANTULA Gould.

Gould's type, Cat. No. 224, U.S.N.M., collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, agrees in every way with *Nassa poecilosticta* Smith. The latter will therefore have to be considered a synonym of *Nassa quantula* Gould, the present species. Cat. No. 186756, U.S.N.M., contains four specimens from Port Alfred (Coll. No. 117).

*ALECTRION CEROTINA* A. Adams.

Cat. No. 187033, U.S.N.M., three specimens from Port Alfred (Coll. No. 569). Cat. No. 250452, U.S.N.M., six from the same place (Coll. No. 1325). Cat. No. 272149, U.S.N.M., one specimen from the Cape of Good Hope.

*ALECTRION PLICOSA* Dunker.

Cat. No. 223, U.S.N.M., eight specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 186758, U.S.N.M., two from Port Alfred (Coll. No. 119). Cat. No. 249739, U.S.N.M., one from the same place (Coll. No. 1011), and one, Cat. No. 249740, U.S.N.M., from the same locality (Coll. No. 1012).

*ALECTRION*, species?

Cat. No. 102723, U.S.N.M., a specimen too poor to be specifically determined, from Cape of Good Hope.

*ALECTRION PYRAMIDALIS* A. Adams.

Cat. No. 186757, U.S.N.M., contains three specimens of this species from Port Alfred (Coll. No. 118).

*ALECTRION*, species?

Cat. No. 2016, U.S.N.M., a young individual collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay.

*ALECTRION KRAUSSIANA* Dunker.

Cat. No. 18166, U.S.N.M., two from Cape of Good Hope. Cat. No. 43021, U.S.N.M., one specimen labelled Africa. Cat. No. 64381, U.S.N.M., one from Cape of Good Hope. Cat. No. 97996, U.S.N.M., four from Albany. Cat. No. 186760, U.S.N.M., three from Port Alfred (Coll. No. 121). Cat. No. 272142, U.S.N.M., five specimens from Port Elizabeth. Cat. No. 272120, U.S.N.M., one specimen from South Africa.

Genus *DESMOULEA* Gray.*DESMOULEA RETUSA* Lamarck.

Cat. No. 21755, U.S.N.M., one from Algoa Bay. Cat. No. 97990, U.S.N.M., two from Albany. Cat. No. 75567, U.S.N.M., three from Cape of Good Hope. Cat. No. 186762, U.S.N.M., four from Port Alfred (Coll. No. 123), and one, Cat. No. 18173, U.S.N.M., from Port Natal.

*DESMOULEA ABBREVIATA* Gmelin.

Cat. No. 186761, U.S.N.M., one from Port Alfred (Coll. No. 122).

Genus *BULLIA* Gray.*BULLIA ANNULATA* Lamarck.

Cat. No. 101, U.S.N.M., four specimens collected by William Stimpson on the North Pacific Exploring Expedition at Cape of Good Hope. Cat. No. 98026, U.S.N.M., three from Albany. Cat. No. 186767, U.S.N.M., four from Port Alfred (Coll. No. 128).

*BULLIA TRIFASCIATA* Smith.

Cat. No. 186764, U.S.N.M., three from Port Alfred (Coll. No. 125).

*BULLIA AEPYNOTA*, new species.

Plate 35, fig. 5.

Shell elongate-conic, light yellow. Nuclear whorls decollated. Postnuclear whorls strongly, tabulatedly shouldered at the summit after the second turn. First two turns feebly rounded, the remainder slightly concave in the middle between the sutures. Surface marked by feeble, retractive lines of growth and well incised spiral lines, which appear to be confined to the anterior two-thirds of the whorls between the sutures. Sutures strongly marked by the flattened shoulder at the summit. Periphery of the last whorl well rounded. Base moderately long, rounded, marked by a few incised spiral lines. Aperture with the posterior angle obtuse, channeled anteriorly; outer lip thin; columella glazed with a thin callus.

The type, Cat. No. 250443, U.S.N.M., comes from Port Alfred (Coll. No. 1316). It has seven postnuclear whorls and measures: Length, 19 mm.; diameter, 6.5 mm.

*BULLIA LARA*, new species.

Plate 38, fig. 3.

Shell large, flesh colored. Nuclear whorls decollated. Postnuclear whorls well rounded, with a rounded shoulder at the summit, marked between the sutures by equal and equally spaced, incised, spiral lines, which are strongest at the anterior two-thirds. Sutures constricted, Aperture large, channeled anteriorly. Posterior angle obtuse; outer lip thin; columella stout and curved; parietal wall glazed with a thin callus.

The type, Cat. No. 249737, U.S.N.M., comes from Port Alfred (Coll. No. 1009). It has eight postnuclear whorls and measures: Length, 38 mm.; diameter, 19 mm. Cat. No. 250443*a* another specimen from the same place (Cat. No. 1316*a*). This specimen somewhat resembles *Bullia tenuis* Reeve, but differs from it by being much more elongated—that is, less broadly conic.

*BULLIA TENUIS* Reeve.

Cat. No. 16826, U.S.N.M., two specimens from Cape of Good Hope. Cat. No. 186766, U.S.N.M., two from Port Alfred (Coll. No. 127).

*BULLIA ALFREDENSIS*, new species.

Plate 3, fig. 2.

Shell elongate-conic, cream yellow marked with a rust brown band which extends over a little more than the anterior half between the sutures. This band is not of uniform purity but consists of a series of dark and lighter elements which give the whorls the false appearance of having brown ribs. (Nuclear whorls worn.) Post-nuclear whorls rounded, narrowly, tabulatedly shouldered at the summit, marked by 10 incised spiral striations of which the posterior six are about equally strong and occupy the posterior third of the whorls between the sutures. These are much finer and closer spaced than the other four which divide the remaining space between the sutures into subequal sections. Periphery of the last whorl well rounded. Sutures strongly constricted. Base slightly produced, marked like the anterior two-thirds between the sutures, the incised lines being a little closer on the extreme base than they were on the periphery. Aperture suboval, channeled anteriorly; posterior angle decidedly obtuse; outer lip thin; columella curved, provided with a strong callus which also extends over the parietal wall.

The type, Cat. No. 187011, U.S.N.M., comes from Port Alfred (Coll. No. 545). It has eight whorls, and measures: Length, 27 mm.; diameter, 9.2 mm.

Three additional lots from Port Alfred are in the collection of the United States National Museum, as follows: Cat. No. 187012, one specimen (Coll. No. 546); Cat. No. 250445, one specimen (Coll. No. 1318); Cat. No. 249736, one specimen (Coll. No. 1008).

*BULLIA ALMO*, new species.

Plate 35, fig. 4.

Shell broadly elongate-conic. Nuclear whorls a little more than one, white, well rounded, smooth. Postnuclear whorls light orange, marked with a strong sloping shoulder which extends over the posterior two-fifths of the whorls between the sutures, the anterior limit of the shoulder forming a decided angle. Surface of the shell marked by numerous, slightly retractive axial lines of growth and fine, incised, spiral lines; the latter are chiefly confined to the sloping shoulder, only two or three extend anterior to this. The incised lines on the shoulders increase in number from the early whorls to the last. They are of irregular size and spacing. About a dozen strong ones, and about half as many less strong, occur upon the shoulder of the last turn. Aperture large, channeled anteriorly. Posterior angle acute; outer lip thin; columella sigmoid; parietal wall glazed with a thin callus.

The type, Cat. No. 250446, U.S.N.M., comes from Port Alfred (Coll. No. 1319). It has  $8\frac{1}{2}$  postnuclear whorls, and measures: Length, 22 mm.; diameter, 9 mm.



**BULLIA CALLOSA** Wood.

Cat. No. 97999, U.S.N.M., three specimens from Albany. Cat. No. 186763, U.S.N.M., one from Port Alfred (Coll. No. 124).

**BULLIA**, species?

Cat. No. 250447, U.S.N.M., contains the tip of an exceedingly broadly conic individual, from Port Alfred, which we are unable to identify with any of the known forms (Coll. No. 1320).

**BULLIA NATALENSIS** Krauss.

Cat. No. 118184, U.S.N.M., one specimen collected by McGuire in South Africa.

**BULLIA PURA** Melvill.

Cat No. 186771, U.S.N.M., six from Port Alfred (Coll. No. 132). Cat. No. 187010, U.S.N.M., six from the same locality (Coll. No. 544). Cat. No. 187013, U.S.N.M., one from the same place (Coll. No. 547).

**BULLIA DILUTA** Krauss.

Cat. No. 186770, U.S.N.M., two specimens from Port Alfred (Coll. No. 131). Cat. No. 272133, U.S.N.M., four from Port Elizabeth.

**BULLIA**, species?

Cat. No. 250448, U.S.N.M., contains a young specimen from Port Alfred, of white color, the early whorls of which are exceedingly solute. It is different from any of the described forms I know, but is too young to serve for a type of a new species. (Coll. No. 1321.)

**BULLIA DIGITALIS** Meuschen.

Cat. No. 178, U.S.N.M., two collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 43063, U.S.N.M., two from Cape of Good Hope. Cat. No. 98028, U.S.N.M., four from Albany. Cat. No. 186769, U.S.N.M., four from Port Alfred (Coll. No. 130).

**BULLIA SEMIFLAMMEA** Reeve.

Cat. No. 16825, U.S.N.M., three specimens from Cape of Good Hope.

**BULLIA RHODOSTOMA** Gray.

Cat. No. 21798, U.S.N.M., one specimen collected by Dunker at Algoa Bay. Cat. No. 98027, U.S.N.M., 15 specimens from Albany. Cat. No. 186768, U.S.N.M., two from Port Alfred (Coll. No. 129).

**BULLIA POLITA** Lamarck.

Cat. No. 131459, U.S.N.M., one specimen from Bird Island, Algoa Bay.

**BULLIA**, species?

Cat. No. 250444, U.S.N.M., contains a species of *Bullia* from Port Alfred, belonging to the group of *B. rhodostoma* Sowerby. It is

smaller than that species and has a channeled suture. The specimen before me received an injury during its youth and I am not sure but that the dwarfing and the channeling of the suture may be due to that cause. I therefore refrain from bestowing a name upon it. (Coll. No. 1317.)

**BULLIA LAEVISSIMA** Gmelin.

Cat. No. 172, U.S.N.M., three collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 16821, U.S.N.M., one from Cape of Good Hope. Cat. No. 16822, U.S.N.M., one from same locality. Cat. No. 186765, U.S.N.M., one from Port Alfred (Coll. No. 126).

Family COLUMBELLIDAE.

Genus COLUMBELLA Lamarck.

COLUMBELLA (SEMINELLA) LIGHTFOOTI Smith.

Cat. No. 186694, U.S.N.M., seven specimens from Port Alfred (Coll. No. 53). Cat. No. 227751, U.S.N.M., eight specimens from the same locality (Coll. No. 846). Cat. No. 227752, U.S.N.M., four specimens from the same source (Coll. No. 847).

COLUMBELLA (SEMINELLA) CAPENSIS Smith.

Six lots of this species, all from Port Alfred, are in the collection of the United States National Museum. Cat. No. 187031, 24 specimens (Coll. No. 567). Cat. No. 227747, six specimens (Coll. No. 842). Cat. No. 227748, four specimens (Coll. No. 843). Cat. No. 227749, four specimens (Coll. No. 844). Cat. No. 227750, four specimens (Coll. No. 845). Cat. No. 250475, one specimen (Coll. No. 1348).

COLUMBELLA (SEMINELLA) ALFREDENSIS, new species.

Plate 37, fig. 5.

Shell small, elongate-ovate; flesh colored, with fairly equally distributed, decidedly, retractively slanting, brownish streaks on the middle of the whorls between the sutures and a few interrupted spiral lines of brown on the base. Nuclear whorls two, smooth. Post-nuclear whorls strongly shouldered at the summit, marked by very strong, rounded, decidedly protractive axial ribs, which are about as wide as the spaces that separate them. These ribs extend prominently from the summit to the suture. On the last whorl they become evanescent on the base. Spiral sculpture apparently absent. Periphery of the last whorl well rounded. Columella marked by two feebly developed spiral cords at its insertion. Aperture moderately large, channeled at the posterior angle and decidedly so anteriorly; middle of the outer lip drawn forward into a claw-like element; parietal wall and the inner edge of the columella glazed with a moderately thick callus.

The type, Cat. No. 249744, U.S.N.M., comes from Port Alfred (Coll. No. 1016). It has five postnuclear whorls, and measures: Length, 6.1 mm.; diameter, 3 mm.

**COLUMBELLA (SEMINELLA), species?**

Cat. No. 250474, U.S.N.M., contains a young specimen of an apparently undescribed *Seminella* from Port Alfred (Coll. No. 1347).

**COLUMBELLA (ANACHIS) BECKERI** Sowerby.

Cat. No. 182029, U.S.N.M., one specimen from Port Alfred (Coll. No. 565).

**COLUMBELLA (ANACHIS) ALGOENSIS** Sowerby.

Cat. No. 186696, U.S.N.M., one specimen from Port Alfred (Coll. No. 55).

**COLUMBELLA (ANACHIS) KRAUSSI** Sowerby.

*Columbella kraussi* SOWERBY, Proc. Zool. Soc., p. 53, 1844 = *Columbella (Anachis) fulminea* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 334, 1860.

Cat. No. 130, U.S.N.M., three specimens Gould's cotypes collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope; and Cat. No. 186698, U.S.N.M., six specimens from Port Alfred (Coll. No. 57).

**COLUMBELLA (ANACHIS) IO**, new species.

Plate 37, fig. 4.

Shell elongate-conic, light brown, variegated with flesh color. Nuclear whorls smooth, well rounded. Postnuclear whorls well rounded, feebly shouldered at the summit, the first three marked by a few ill-defined, broad, decidedly retractive axial ribs, the rest smooth, excepting lines of growth and irregularly disposed, fine spiral striations. Sutures moderately constricted. Periphery of the last whorl well rounded. Base rather long, marked by lines of growth and a few spiral striations. The columella bears seven lirations which become successively weaker from the insertion to the pit. Aperture moderately large. Posterior angle acute; outer lip thin.

The type, Cat. No. 250469, U.S.N.M., comes from Port Alfred (Coll. No. 1342). It has five postnuclear whorls, and measures: Length, 6.5 mm.; diameter, 2.2 mm.

**COLUMBELLA (ANACHIS), species?**

Cat. No. 250471, U.S.N.M., contains a young shell from Port Alfred, which we are unable to connect with any of the described species (Coll. No. 1344).

**COLUMBELLA (ANACHIS), species?**

Cat. No. 249746, U.S.N.M., contains a young shell from Port Alfred, which we are unable to connect with any of the described species (Coll. No. 1018).

**COLUMBELLA (ALIA) PYRAMIDALIS** Sowerby.

Cat. No. 186695, U.S.N.M., three specimens from Port Alfred (Coll. No. 54).

**COLUMBELLA (ALIA) ADJACENS** Smith.

Cat. No. 186699, U.S.N.M., one specimen from Port Alfred (Coll. No. 58).

**COLUMBELLA (ALIA) ALBUGINOSA** Reeve.

Three lots of this species are in the United States National Museum from the Cape of Good Hope. Cat. No. 18222, one specimen. Cat. No. 31920, two specimens, and one Cat. No. 102722. In addition to these, we have seen six lots from Port Alfred, four of which are in the United States National Museum and two have been returned to Colonel Turton. Cat. No. 186697, five specimens (Coll. No. 56). Cat. No. 227754, six specimens (Coll. No. 849). Cat. No. 227755, four specimens (Coll. No. 850). Those returned have (Coll. No. 1605) 59 specimens and (Coll. No. 1606) 17 specimens.

**COLUMBELLA (ALIA) APICATA** Smith.

Cat. No. 250465, U.S.N.M., contains one specimen from Port Alfred (Coll. No. 1338).

**COLUMBELLA (ALIA), species?**

Cat. No. 250478, U.S.N.M., contains a worn specimen of a very minute *Alia* from Port Alfred, which I am unable to identify (Coll. No. 1351).

**COLUMBELLA (ALIA), species?**

Cat. No. 250473, U.S.N.M., contains the early whorls of a beautiful, slender species belonging to this subgenus, from Port Alfred, which I am unable to connect with any of the described species (Coll. No. 1346).

**Genus ALCIRA** H. Adams.**ALCIRA ELEGANS** H. Adams.

Cat. No. 31920 $\alpha$ , U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 186693, U.S.N.M., one specimen from Port Alfred (Coll. No. 52). Cat. No. 272139, U.S.N.M., six specimens from Port Elizabeth, and Cat. No. 272140, U.S.N.M., two from South Africa.

**ALCIRA, species?**

Cat. No. 250466, U.S.N.M., contains a specimen of *Alcira* from Port Alfred, which is shorter and broader than *A. elegans*, but it is too badly worn to serve for description of a new species (Coll. No. 1339).

**ALCIRA, species?**

Cat. No. 250481, U.S.N.M., contains a very young specimen of a small slender species from Port Alfred, which appears to belong to this genus (Coll. No. 1354).

## Family MURICIDAE.

## Genus MUREX Linnaeus.

## MUREX UNCINARIUS Lamarck.

Cat. No. 16861, U.S.N.M., one from Cape of Good Hope. Cat. No. 91701, U.S.N.M., three collected by Layard at the same place. Cat. No. 98005, U.S.N.M., three from Albany. Cat. No. 186772, U.S.N.M., one from Port Alfred (Coll. No. 133), and Cat. No. 252155, U.S.N.M., one from Africa without specific locality. Cat. No. 272150, U.S.N.M., one specimen from Algoa Bay. Cat. No. 272151, U.S.N.M., three from the Cape of Good Hope.

## MUREX ALFREDENSIS, new species.

Plate 37, fig. 6.

Shell small, yellowish white, with a zone of wax yellow, which extends over the central half of each whorl, leaving the posterior half between the sutures and the basal tip white. (Nuclear whorls decolled); postnuclear whorls well rounded, ornamented with strong lamellar ribs of which ten occur upon all the whorls. These lamellae are slender, recurved, and project at their tips considerably above the strong shoulder of the whorls. The intercostal spaces are scarcely at all depressed, they are about three times as wide as the ribs and are marked by slender and equally spaced spiral threads, of which seven occur upon the first, eight upon the second, and ten upon the penultimate whorl between the sutures. In addition to the above-mentioned sculpture, the spire is marked by numerous, very fine axial lines of growth; summits tabulatedly shouldered; the shoulder crossed by the ribs. Periphery of the last whorl gently rounded. Base quite prolonged, marked by the continuations of the axial ribs which extend quite prominently to the extreme anterior portion of the base, and about fifteen equal and equally spaced, spiral threads, which are equal to those of the spire in strength and spacing. Aperture strongly channeled anteriorly; outer lip reenforced by a very thick varix which is expanded and flattened and is marked by the spiral sculpture; inner lip strongly curved, reflected over and appressed to the base, parietal wall covered by a thick callus.

The type, Cat. No. 227763, comes from Port Alfred. It has four postnuclear whorls, and measures: Length, 6 mm.; diameter, 3 mm. (Coll. No. 858).

## Genus TROPHON Montfort.

## TROPHON KOWIENSIS Sowerby.

Cat. No. 187032, U.S.N.M., one from Port Alfred (Coll. No. 568).

Cat. No. 227766, U.S.N.M., two specimens from the same locality (Coll. No. 861).



**TROPHON INSIGNIS** Sowerby.

Cat. No. 186777, U.S.N.M., three specimens from Port Alfred (Coll. No. 138).

**TROPHON**, species?

Cat. No. 250464, U.S.N.M., contains the very tip of a *Trophon*, from Port Alfred, too young to be identified (Coll. No. 1337).

**TRAPHON**, species?

Cat. No. 250467, U.S.N.M., contains the tip of another species of *Trophon*, from Port Alfred, too young to be identified (Coll. No. 1340).

Genus **TRITONALIA** Fleming.**TRITONALIA CRAWFORDI** Sowerby.

Cat. No. 109601, U.S.N.M., six specimens from Cape of Good Hope.

Cat. No. 186776, U.S.N.M., three from Port Alfred (Coll. No. 137).

Cat. No. 43083, U.S.N.M., nine specimens from Cape of Good Hope.

Cat. No. 98041, U.S.N.M., 28 from Albany. Cat. No. 16884, U.S.N.M., five from Cape of Good Hope. Cat. No. 186773, U.S.N.M., three from Port Alfred (Coll. No. 134).

**TRITONALIA PURPUROIDES** Dunker.

Cat. No. 272129, U.S.N.M., four specimens from the Cape of Good Hope.

**TRITONALIA KIENERI** Reeve.

Cat. No. 98044, U.S.N.M., four specimens from Albany. Cat. No. 186775, U.S.N.M., three from Port Alfred (Coll. No. 136).

**TRITONALIA BABINGTONI** Sowerby.

Cat. No. 186774, U.S.N.M., three specimens from Port Alfred (Coll. No. 135).

Cat. No. 227767, U.S.N.M., six specimens from the same locality (Coll. No. 862), and Cat. No. 227768, U.S.N.M., four specimens from the same source (Coll. No. 863).

Genus **SISTRUM** Montfort.**SISTRUM ALFREDENSIS**, new species.

Shell elongate-ovate, pale chestnut brown, washed with a greenish suffusion, interior pale brown. Nuclear whorls decollated. Post-nuclear whorls with a prominent shoulder in the middle between the sutures, ornamented with strong coarse ribs, which become diminished in size from the shoulders posteriorly and anteriorly. Of these ribs 12 occur upon the second and 10 upon the remaining turns. The spaces between the ribs are about two-thirds as wide as the ribs. In addition to this the entire surface is covered by coarse lines of growth. The spiral sculpture consists of six feebly developed slender threads between the summit and the shoulder, and three strong cords between the shoulder and the suture, the first of these three cords being on the posterior portion of the shoulder. A slender spiral

thread appears midway between the spiral cords. Periphery of the last whorl well-rounded. Base somewhat produced, marked by seven cords equaling those on the anterior portion of the spire in strength. The four grooves between the cords anterior to the periphery have each a slender spiral thread. Aperture irregularly oval, channeled anteriorly and posteriorly; outer lip thin at the edge, where it is rendered somewhat sinuous by the external sculpture, thick within and armed by a callus, bearing seven denticles, columella stout, slightly curved, and partly reflected over the body whorl.

The type has six whorls and measures: Length, 18.5 mm.; diameter, 10.1 mm. The type and another specimen, Cat. No. 272130, U.S.N.M., were received from Mr. John B. Henderson in a collection recently donated to the United States National Museum, which was purchased from Sowerby and Fulton, and was labelled "*Pentadactylus lividus* Reeve, South Africa." It is not Reeve's species, which comes from the Philippines and which we have in the collection of the National Museum from the type locality. True *lividus* is a much stouter species with different detailed sculpture. The specimens reached me as this paper was passing through press. I was therefore unable to add a figure of it.

#### Genus THAIS Bolten.

##### THAIS CAPENSIS Petit.

Cat. No. 186778, U.S.N.M., one from Port Alfred (Coll. No. 139).

##### THAIS TEXTURATA Smith.

Cat. No. 186779, U.S.N.M., two from Port Alfred (Coll. No. 140).

##### THAIS CASTANEA Kuster.

Cat. No. 186782, U.S.N.M., two from Port Alfred (Coll. No. 143).

##### THAIS CATARACTA Chemnitz.

Cat. No. 186781, U.S.N.M., three from Port Alfred (Coll. No. 142).

##### THAIS SQUAMOSA Lamarck.

Cat. No. 186780, U.S.N.M., one from Port Alfred (Coll. No. 141).

#### Genus LATIAXIS Swainson.

##### LATIAXIS ROSACEUS Smith.

Cat. No. 186783, U.S.N.M., two from Port Alfred (Coll. 144).

#### Family CORALLIOPHILIDAE.

##### Genus CORALLIOPHILA H. and A. Adams.

##### CORALLIOPHILA RUBROCOCCINEA Melvill and Standen.

Cat. No. 186784, U.S.N.M., one specimen from Port Alfred (Coll. No. 145).

Cat. No. 187028, U.S.N.M., one from the same place (Coll. No. 564).

Genus *MELAPIUM* H. and A. Adams.*MELAPIUM BULBOSUM* Wood.

Cat. No. 186743, U.S.N.M., one specimen from Port Alfred (Coll. No. 102).

Cat. No. 250442, U.S.N.M., one from the same locality (Coll. No. 1315).

## Family SCALIDAE.

Genus *EPITONIUM* Bolten.*EPITONIUM AFRICANUM*, new species.

Plate 9, fig. 2.

Shell large, elongate-conic. (Nuclear whorls decollated in all our specimens.) Postnuclear whorls well rounded, marked by narrow, lamellose, retractive axial ribs, of which 16 occur upon the first to fifth; 20 upon the sixth and the penultimate turn. These ribs form continuous lines on the spire. Periphery of the last whorl well rounded. Base with a single narrow spiral cord, a little anterior to the periphery. Sutures very strongly constricted; entire surface of spire and base marked by very slender incremental lines and exceedingly fine, microscopic, spiral striations. Aperture oval; outer lip thin; inner lip thick; strongly curved and decidedly reflected; parietal wall covered by moderately thick callus, which renders the peristome complete.

The coloration of the type is as follows: A narrow band of brown separated from the summit by a white area, about as wide as the band. This band is only present in the intercostal spaces. The brown does not extend up on the ribs. A second, much wider band borders the basal cord posteriorly. A third, somewhat paler, is immediately anterior to the basal cord. In addition to these, a series of very obliquely slanting brown lines occur on the middle of the white space inclosed between the brown band at the summit and the cord immediately below the periphery. These markings appear much stronger within the aperture.

The type and another specimen, Cat. No. 186837, U.S.N.M., come from Port Alfred (Coll. No. 204). The type has lost the nuclear whorls and probably the first postnuclear whorl. The seven and a half remaining measure: Length, 31 mm.; diameter, 13.3 mm. Cat. No. 187035, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 572). One of these is typically colored; the other is pale brown with white ribs. Three additional lots from Port Alfred are in the collection of the United States National Museum, Cat. No. 187036, one specimen (Coll. No. 573). Cat. No. 249717, two specimens (Coll. No. 989). Cat. No. 249718, three specimens (Coll. No. 990).

**EPITONIUM TENEBROSUM** Sowerby.

Cat. No. 186836, U.S.N.M., contains two specimens of this species, from Port Alfred (Coll. No. 203). Cat. No. 249716, U.S.N.M., contains two additional specimens from the same locality. (Coll. No. 988).

**EPITONIUM DURBANENSE** Smith.

Cat. No. 186838, U.S.N.M., two specimens from Port Alfred (Coll. No. 205).

**EPITONIUM LACTEUM** Krauss.

Cat. No. 145, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition, at False Bay, Cape of Good Hope. Cat. No. 186839, U.S.N.M., three specimens from Port Alfred (Coll. No. 206).

**EPITONIUM AGLAIA**, new species.

Plate 17, fig. 4.

Shell elongate-conic, white. (Nuclear whorls decollated.) Post-nuclear whorls well rounded; marked by numerous, very retractive axial ribs, which are about one-half as wide as the spaces that separate them, and an occasional varix. The latter are irregularly distributed. Of the axial ribs, 28 occur upon the first and second of the remaining whorls, 30 upon the third, 36 upon the fourth, 40 upon the fifth, and 42 upon the penultimate turn. In addition to the axial ribs, the whorls are marked by numerous spiral striations, which are more closely crowded at the summit than on the rest of the whorl. About 34 of these lirations occur between the sutures on the penultimate turn. Sutures strongly constricted. Periphery of the last whorl marked by a feeble angulation. Base moderately long, well rounded, marked by closely crowded, spiral striations. Aperture subcircular; outer lip forming a thickened peristome; inner lip strongly curved and somewhat reflected; parietal wall covered with a thick callus, which renders the peritreme complete.

The type, Cat. No. 187037, U.S.N.M., comes from Port Alfred (Coll. No. 574). It has seven postnuclear whorls remaining, and measures: Length, 12 mm.; diameter, 6 mm. Cat. No. 250412, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1285).

**EPITONIUM**, species?

Cat. No. 250411, U.S.N.M., contains the tip of a broadly conic little *Epitonium*, which has fine axial ribs, and spiral lirations in the intercostal spaces. It is different from any *Epitonium* known from South Africa and comes from Port Alfred (Coll. No. 1284).

Genus *ACRILLA* H. Adams.*ACRILLA THALIA*, new species.

Plate 17, figs. 5, 8.

Shell elongate-conic, light brown, with a narrow white band on the middle of each whorl. Nuclear whorls decollated. Postnuclear whorls decidedly rounded, separated by a strongly constricted suture, marked by well developed, very regular, almost vertical axial ribs, of which 18 occur upon the first of the remaining turns; 20 upon the second; 22 upon the third and fourth; 26 upon the fifth; 28 upon the sixth, and 34 upon the seventh and the penultimate turn. These ribs are about one third as wide as the spaces that separate them. Intercostal spaces marked by irregularly distributed, feebly incised, spiral striations. Periphery of the last whorl well rounded; marked by a poorly developed spiral cord. Base moderately rounded, marked by the continuations of the axial ribs, and feebly incised, spiral striations. Aperture oval; outer lip thin, showing the external markings within; inner lip decidedly curved and reflected; parietal wall glazed with a thin callus.

The type and another specimen, Cat. No. 186840, come from Port Alfred (Coll. No. 207). The type has nine whorls remaining and measures: Length, 33 mm.; diameter, 8 mm. The other specimen which has lost the nuclear whorls, having the nine succeeding turns, measures: Length, 17 mm.; diameter, 4.3 mm.

Genus *GRAPHIS* Jeffreys.*GRAPHIS AFRICANA*, new species.

Plate 36, fig. 10.

Shell very minute, slender, elongate-conic, translucent. Nuclear whorls a little more than two, somewhat inflated, smooth. Post-nuclear whorls well rounded, appressed at the summit, marked by almost vertical, somewhat sinuous axial riblets, of which 18 occur upon the first, 22 upon the second and third, 24 upon the fourth and fifth, and 26 upon the penultimate turn. These riblets are about one-half as wide as the spaces that separate them. Intercostal spaces crossed by slender spiral threads, of which about 15 occur between the sutures on the later whorls. Periphery of the last whorl well rounded. Base moderately prolonged, well rounded, marked posteriorly by the feeble continuations of the axial ribs, which vanish before crossing half of the base, and numerous, very fine, incised, spiral striations. Aperture broadly oval; posterior angle obtuse; outer lip thin, showing the external sculpture within; inner lip thin and slightly reflected.

The type, Cat. No. 249703, U.S.N.M., comes from Port Alfred (Coll. No. 975). It has six and a half postnuclear whorls and measures: Length, 2.3 mm.; diameter, 0.5 mm. Cat. No. 249708, U.S.N.M. (Coll. No. 980), contains one specimen from Port Alfred.



## Family JANTHINIDAE.

## Genus JANTHINA Bolten.

## JANTHINA COMMUNIS Lamarck.

Cat. No. 77279, U.S.N.M., contains one specimen from the Cape of Good Hope. Cat. No. 97994, U.S.N.M., five specimens from Albany. In addition to these, the Museum contains three lots from Port Alfred. Cat. No. 249755, three specimens. (Coll. No. 1027.) Cat. No. 250503, one specimen (Coll. No. 1376). Cat. No. 250504, one specimen (Coll. No. 1377).

## JANTHINA GLOBOSA Swainson.

Cat. No. 186833, U.S.N.M., contains one specimen from Port Alfred (Coll. No. 200).

## JANTHINA TROCHOIDEA Reeve.

Cat. No. 186834, U.S.N.M., two specimens from Port Alfred (Coll. No. 201).

## JANTHINA EXIGUA Lamarck.

Cat. No. 186835, U.S.N.M., one specimen from Port Alfred (Coll. No. 202). Cat. No. 272131, U.S.N.M., six specimens from Algoa Bay.

## JANTHINA FRAGILIS Lamarck.

Cat. No. 187096, U.S.N.M., one specimen from Port Alfred (Coll. No. 640).

## Family EULIMIDAE.

## Genus MELANELLA Bowdich.

## MELANELLA DILECTA Smith.

Four lots of this species are in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186855, four specimens (Coll. No. 225); Cat. No. 227730, four specimens (Coll. No. 825); Cat. No. 227731, six specimens (Coll. No. 826); Cat. No. 249707, one specimen (Coll. No. 979).

## MELANELLA ALGOENSIS Smith.

Cat. No. 249712, U.S.N.M., contains one specimen from Port Alfred (Coll. No. 984).

## MELANELLA SIMPLEX Sowerby.

Cat. No. 186857, U.S.N.M., contains one specimen from Port Alfred (Coll. No. 227).

## MELANELLA CARIFA, new species.

Plate 20, fig. 7.

Shell small, slender, flexed, semitranslucent, polished, bluish white. Whorls slightly rounded on the curved and slightly concave on the opposite side, appressed at the summit to such an extent that

the suture is scarcely apparent, while the posterior limit of the body cavity shining through the substance of the shell assumes the appearance of a suture. The whorls are marked at irregular intervals by slightly impressed axial lines marking varices. Periphery of the last whorl well rounded. Base produced. Aperture oval; posterior angle very acute; outer lip thin at the edge, produced into a clawlike element midway between the base and the posterior angle; inner lip thick, slightly curved, reflected over and adnate to the body whorl; parietal wall covered by a thin callus.

The type, Cat. No. 250384, U.S.N.M., comes from Port Alfred (Coll. No. 1257). It has 10 whorls, and measures: Length, 4.1 mm.; diameter, 1.2 mm.

A young specimen from the same locality is entered as Cat. No. 250383, U.S.N.M (Coll. No. 1256).

**MELANELLA ICAFRA**, new species.

Plate 20, fig. 3.

Shell very small, stout, decidedly twisted, semitranslucent. Nuclear whorls well rounded. Postnuclear turns appressed at the summit, well rounded, polished, marked by an occasional varix. The posterior limit of the inside of the whorls shining through the substance of the shell appears as a false suture. Sutures scarcely visible. Periphery of the last whorl slightly angulated, inflated. Base prolonged, inflated, and well rounded. Aperture rather large; posterior angle acute; outer lip drawn forward in the middle into a claw-like element; inner lip thin, reflected over and adnate to the body whorl; parietal wall glazed by a thin callus.

The type and another specimen, Cat. No. 250380, U.S.N.M., come from Port Alfred (Coll. No. 1253). The type has seven whorls, and measures: Length, 2.2 mm.; diameter, 1 mm.

**MELANELLA ALFREDENSIS**, new species.

Plate 19, fig. 5.

Shell small, elongate-conic, slightly falcate, almost transparent, bluish white. The whorls are slightly rounded, appressed at the summit, through which the preceding whorl shines, giving the shell the aspect of having a double suture. Suture feebly impressed. Periphery well rounded. Base attenuated, well rounded; entire surface polished and marked by exceedingly fine, incremental lines and an occasional, irregularly disposed varix. Aperture ovate; outer lip somewhat clavate; inner lip appressed; gently curved; parietal wall glazed with a thin callus.

The type, Cat. No. 187076, U.S.N.M., comes from Port Alfred (Coll. No. 617). It has eight postnuclear whorls, and measures: Length, 4 mm.; diameter, 1.2 mm.

*MELANELLA IOTA*, new species.

Plate 19, fig. 2.

Shell exceedingly minute, translucent, bluish white, falcate. The whorls are almost flattened, appressed at the summit, separated by a scarcely perceptible suture, and of glassy texture, marked by an occasional inconspicuous varix. Periphery of the last whorl well rounded. Base somewhat attenuated, well rounded. Aperture oval; outer lip thin, clavate; inner lip short, strongly curved and appressed; parietal wall covered by a thick callus.

The type and three specimens, Cat. No. 187080, U.S.N.M., come from Port Alfred (Coll. No. 621). The type has seven whorls, and measures: Length, 1.5 mm.; diameter, 0.5 mm.

Cat. No. 250378, U.S.N.M., contains two additional specimens from the same locality (Coll. No. 1251).

*MELANELLA DISTINCTA* Smith.

Cat. No. 187075, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 616).

*MELANELLA LANGLEYI* Sowerby.

Cat. No. 186856, U.S.N.M., six specimens from Port Alfred (Coll. No. 226).

*MELANELLA FARICA*, new species.

Plate 20, fig. 1.

Shell small, very irregularly elongate-conic, semitranslucent, bluish white. Postnuclear whorls well rounded, creeping up on the preceding turns and giving the outline at the summit a somewhat excurved aspect, the extreme summit being very feebly shouldered. This, taken together with the fact that the posterior limit of the inside of the whorls shines through the substance of the shell, gives the whorls the appearance of having a spiral cord at the summit. The whorls are very high between the sutures, and are smooth and polished, bearing varices at intervals of slightly more than one-half a turn, thus forming almost two lines of varices on the two sides of the shell. Sutures strongly marked. Periphery of the last whorl well rounded. Base attenuated. Aperture oval; posterior angle acute; outer lip produced into a claw-like element in its middle; inner lip almost straight, oblique, reflected over and adnate to the body whorl; parietal wall covered with a thick callus, which renders the peritreme complete.

The type and another specimen, Cat. No. 249711, U.S.N.M., come from Port Alfred (Coll. No. 983). The type has seven whorls, and measures: Length, 3 mm.; diameter, 0.8 mm.

Cat. No. 250379, U.S.N.M., contains another specimen of this species from the same locality (Coll. No. 1252).

*MELANELLA THALIA*, new species.

Plate 19, fig. 9.

Shell small, elongate-conic, very slightly falcate, bluish white; translucent. The whorls are very gently rounded; appressed at the summit, through which the preceding whorl shines, which gives the shell the appearance of having a double suture. Suture scarcely marked. Periphery of the last whorl slightly inflated. Base moderately long, well rounded; entire surface marked by exceedingly fine lines of growth, and an occasional inconspicuous varix. Aperture oval; posterior angle acute; outer lip clavate; inner lip very oblique, slender, strongly curved and decidedly reflected, free; parietal wall covered with a moderately thick callus.

The type and two other specimens, Cat. No. 187078, U.S.N.M., come from Port Alfred (Coll. No. 619). The type has eight whorls, and measures: Length, 3.2 mm.; diameter, 1.1 mm.

*MELANELLA ASSER*, new species.

Plate 25, fig. 7.

Shell very minute, bluish white; transparent; not falcate. Whorls almost flattened; appressed at the summit, through which the preceding whorl shines, which lends the shell the aspect of having a double suture. Suture scarcely perceptible. Periphery of the last whorl well rounded. Base moderately long, well rounded; entire surface of spire and base marked by exceedingly fine, incremental lines. No varicial markings are apparent on any of our shells. Aperture oval, posterior angle acute; outer lip clavate; inner lip short, curved, slightly reflected; parietal wall covered by a moderately thick callus.

The type and two specimens, Cat. No. 187079, U.S.N.M., come from Port Alfred (Coll. No. 620). The type has five and one-half whorls, and measures: Length, 1.7 mm.; diameter, 0.7 mm.

Cat. No. 250382, U.S.N.M., contains another specimen from the same locality (Coll. No. 1255).

*MELANELLA*, species ?

Cat. No. 250385, U.S.N.M., contains the tip of a large, straight species from Port Alfred, differing from any of those I have seen from South Africa (Coll. No. 1258).

*MELANELLA ACRIFA*, new species.

Plate 20, fig. 8.

Shell large, regularly elongate-conic, thin. Nuclear whorls two, well rounded, forming a somewhat bulbous apex. Postnuclear turns well rounded, appressed at the summit, the appressed portion appearing as a slender thread; entire surface marked by almost vertical, somewhat sinuous, strongly curved lines of growth. Sutures strongly

constricted. Periphery of the last whorl well rounded. Base moderately long, well rounded, marked like the spire. Aperture oval; posterior angle acute; outer lip thin, showing the growth lines within; inner lip almost vertical, decidedly reflected, free on the anterior half; parietal wall glazed with a moderately thick callus.

The type and another specimen, Cat. No. 249713, U.S.N.M., come from Port Alfred (Coll. No. 985). The type has six postnuclear whorls, and measures: Length, 9.2 mm.; diameter, 3.1 mm.

**MELANELLA, species?**

Cat. No. 250386, U.S.N.M., contains the tip of a *Melanella*, consisting of five whorls, which are absolutely cylindrical, and differs from anything I know of from South Africa, but I refrain from describing it until better material is at hand. Port Alfred (Coll. No. 1259).

**MELANELLA CIFARA, new species.**

Plate 20, fig. 5.

Shell minute, acicular, semitranslucent, flesh-colored, variegated with brown. Nuclear whorls two, well rounded, translucent, pale brown. Postnuclear turns very slightly rounded, almost transparent, variegated with translucent pale brown and opaque flesh-colored spots, appressed at the summit, polished, apparently without varicial markings. Suture scarcely defined. The inner posterior termination of the whorls appear as a suture through the substance of the shell. Periphery well rounded. Base attenuated, well rounded. Aperture elongate-oval; posterior angle acute; outer lip drawn forward in the middle to form a claw-like element; inner lip almost straight, oblique, reflected over and appressed to the body whorl throughout its entire length; parietal wall glazed by a moderately thick callus.

The type, Cat. No. 250381, U.S.N.M., comes from Port Alfred (Coll. No. 1254). It has five postnuclear whorls, and measures: Length, 2.1 mm.; diameter, 0.6 mm.

**MELANELLA IRAFCA, new species.**

Plate 20, fig. 6.

Shell of medium size, regularly elongate-conic, bluish white, flecked with irregularly disposed blotches of pale golden yellow, a narrow peripheral zone of the same tint, and with a small spot of the same color marking the umbilical region. Nuclear whorls decollated. Postnuclear whorls rather high between the sutures, which are very poorly expressed, the posterior termination of the inside of the whorls appearing as the suture. Outer surface polished, marked only by an occasional varicial line. Periphery of the last whorl well rounded. Base prolonged, well rounded. Aperture elongate-oval; posterior angle acute; outer lip drawn forward into a claw-like element in the



middle; inner lip somewhat sinuous, reflected over and adnate to the preceding turn; parietal wall covered with a moderately thick callus, which renders the peritreme complete.

The type, Cat. No. 249710, U.S.N.M., comes from Port Alfred (Coll. No. 982). It has seven postnuclear whorls (having lost the nuclear turns), and measures: Length, 5.5 mm.; diameter, 1.6 mm.

Genus *SUBEULIMA* Sowerby.

*SUBEULIMA MAGNIFICA*, new species.

Plate 19, fig. 6.

Shell elongate-conic, vitreous, semitranslucent; nuclear whorls well rounded, scarcely differentiated from the succeeding turns. Post-nuclear whorls almost flattened, marked with a strong cord at the periphery, the summit of the succeeding turns falling considerably anterior to this cord, which gives the whorls a decidedly overhanging appearance. In addition to this spiral sculpture the whorls are marked by ill-defined, irregularly distributed varices. Sutures rendered conspicuous by the peripheral keel. Base of the last whorl well rounded, somewhat produced, smooth. Aperture oval; posterior angle acute, outer lip moderately thick; inner lip strongly curved and appressed to the base; parietal wall covered with a thick callus, which renders the peritreme complete.

The type and two specimens, Cat. No. 227729 (Coll. No. 824) are from Port Alfred. The type has nine postnuclear whorls, and measures: Length, 5 mm.; diameter, 1.5 mm.

Genus *NISO* Risso.

*NISO BALTEATA* Sowerby.

Cat. No. 186860, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 230).

*NISO ALFREDENSIS*, new species.

Plate 18, fig. 6.

Shell elongate-conic, broadly umbilicated, flesh colored, except irregularly disposed varices of chestnut brown and a broad band of the same tint, which occupies the middle of the space between the periphery and the carina, bordering the umbilicus. Nuclear whorls decollated. Post-nuclear whorls moderately rounded, appressed at the summit, marked by fine lines of growth only. Sutures moderately constricted. Periphery of the last whorl feebly angulated. Base short, broadly umbilicated, the outer edge of the umbilicus marked by a spiral cord; the space between this and the periphery well rounded. Aperture small, oval; outer lip thin; inner lip strongly curved, marked by the basal band.

The type and another specimen, Cat. No. 249719, U.S.N.M., come from Port Alfred (Coll. No. 991). The type has nine postnuclear whorls remaining, the nucleus, and probably the first two of the succeeding turns, having been lost. It measures: Length, 11 mm.; diameter, 4.3 mm.

Another specimen from the same locality is entered as Cat. No. 186861, U.S.N.M. (Coll. No. 231).

### Family PYRAMIDELLIDAE.

#### Genus PYRAMIDELLA Lamarck.

##### PYRAMIDELLA (ORINELLA) AFRICANA, new species.

Plate 14, figs. 2, 4.

Shell elongate-conic, light brown. Nuclear whorls two, small, planorboid, having their axis at right angles to that of the succeeding turns, in the first of which they are very slightly immersed. Postnuclear whorls almost flat, feebly shouldered at the summit, marked by very fine incremental lines, and exceedingly fine spiral striations. Suture moderately constricted. Periphery of the last whorl well rounded. Base short, well rounded, narrowly umbilicated, marked like the spire. Aperture subquadrate; posterior angle acute; outer lip thin; inner lip almost vertical, strongly reflected, provided with a fold a little anterior to its insertion.

Cat. No. 186841*a*, U.S.N.M. contains three specimens from Port Alfred (Coll. No. 208). Two of these are young individuals having the nucleus, and one an adult shell, which has lost the nuclear whorls, and probably the first four succeeding turns. The adult specimen, the type, has seven whorls remaining, and measures: Length, 6.1 mm.; diameter, 1.8 mm. One of the young specimens has eight postnuclear whorls, and measures: Length, 3.7 mm.; diameter, 1.2 mm.

##### PYRAMIDELLA (ORINELLA) ALFREDENSIS, new species.

Plate 14, figs. 5, 7.

Shell elongate-conic, milk white. Nuclear whorls very small, one and three-fourths, planorboid, having their axis at right angles to that of succeeding turns. The left side of the nucleus projects considerably beyond the outline of the postnuclear spire. Postnuclear whorls almost flat; feebly shouldered at the summit, marked by exceedingly fine, retractive, incremental lines, and numerous microscopic spiral striations. Suture moderately constricted. Periphery of the last whorl well rounded. Base well rounded, decidedly umbilicated, marked like the spire. Aperture subquadrate; posterior angle acute; outer lip thin; inner lip very oblique, and decidedly reflected, provided with a strong fold near its insertion; parietal wall glazed with a thin callus.

Two specimens of this species, Cat. No. 186841*b*, U.S.N.M., come from Port Alfred (Coll. No. 208). One of these is a young individual, which has 10 postnuclear whorls, and measures: Length, 6 mm.; diameter, 2 mm. The other, the type, has lost the nuclear whorls, and early postnuclear turns; the eight remaining measure: Length, 9 mm.; diameter, 3 mm. The present species is closely allied to the preceding, but is in every way much larger; it also differs in coloration, and is more widely umbilicated.

**PYRAMIDELLA (ORINELLA) IMA, new species.**

Plate 15, fig. 3.

Shell elongate-conic, pale flesh colored, with a broad, pale yellow band immediately below the summit which extends over the posterior third of the whorls between the sutures, and a very narrow, light brown band a little anterior to the periphery. Nuclear whorls decollated. Postnuclear whorls feebly shouldered at the summit, flattened in the middle, marked by fine, slightly retractive lines of growth, and exceedingly fine, closely spaced, spiral striations. Sutures moderately constricted. Periphery of the last whorl strongly rounded. Base short, very strongly rounded, narrowly umbilicated, marked like the spire, the lines of growth being a little stronger than on the spire. Aperture broadly ovate; posterior angle obtuse; outer lip thin; columella slender, oblique, slightly revolute, provided with an oblique fold near its insertion; parietal wall glazed with a thin callus.

The type, Cat. No. 250408, U.S.N.M., comes from Port Alfred (Coll. No. 1281). It has lost the nucleus and the early postnuclear whorls; the eight remaining measure: Length, 7.5 mm.; diameter, 2.5 mm.

**PYRAMIDELLA (ACTAEOPYRAMIS) NORNA, new species.**

Plate 15, fig. 4.

Shell moderately large, elongate-conic, white. Nuclear whorls slightly, obliquely immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Post-nuclear whorls strongly shouldered at the summit, marked by equal and equally spaced, incised, spiral grooves, which permit the spaces between them, which are about three times as wide as the grooves, to appear as well-raised spiral cords. Of these grooves, six appear upon the first and second, and seven upon the succeeding turns between the sutures. In addition to the spiral grooves, the whorls are marked by very slender, quite regular and regularly spaced, somewhat retractive, axial threads, which are best shown in the grooves which they divide into a series of punctations, about 80 of which occur upon the last turn. The spiral cords between the spiral grooves are slightly

flattened and marked by very fine spiral striations. Periphery of the last whorl well rounded. Base moderately long, well rounded, marked like the spire, the incised spiral grooves becoming a little more closely spaced toward the anterior end. Of these grooves, 10 are present on the base. Aperture ovate; posterior angle obtuse; outer lip thin, showing the external sculpture within, rendered slightly wavy by the sculpture; columella oblique, slightly curved, reflected over and appressed to the base; parietal wall covered by a thin callus.

The type, Cat. No. 249738, U.S.N.M., comes from Port Alfred (Coll. No. 1010). It has six postnuclear whorls, and measures: Length, 5.9 mm.; diameter, 2 mm.

**PYRAMIDELLA (SYRNOLA) CAPENSIS** Sowerby.

Three specimens of this species are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 186841, three specimens (Coll. No. 208). Cat. No. 250409, one specimen (Coll. No. 1282). Cat. No. 249714, two specimens (Coll. No. 986).

**PYRAMIDELLA (SYRNOLA) PYRRHA**, new species.

Plate 14, fig. 8.

Shell elongate-conic; creamy yellow, with a narrow, golden brown band situated about one-fourth of the distance between the summit and suture posterior to the suture. (Nuclear whorls decollated.) Postnuclear whorls slightly rounded, feebly shouldered at the summit, marked with numerous fine, slightly retractive, incremental lines, and exceedingly fine, spiral striations. Periphery of the last whorl well rounded. Base slightly produced, well rounded, marked like the spire. Aperture subquadrate; posterior angle obtuse, outer lip thin, inner lip flexuous, slightly reflected, and provided with a moderately strong fold a little anterior to its insertion; parietal wall glazed with a thin callus.

The type, Cat. No. 186841c, U.S.N.M., comes from Port Alfred (Coll. No. 208). It has lost the nuclear whorls and early postnuclear turns; the seven remaining measure: Length, 5.8 mm.; diameter, 1.9 mm. Cat. No. 250408a U.S.N.M., contains an additional specimen from Port Alfred (Coll. No. 1281).

**PYRAMIDELLA (SYRNOLA) AGANEA**, new name.

Plate 14, fig. 9.

=*Eulimella nivea* SMITH, Journ. Malac., vol. 11, p. 36, pl. 3, fig. 2, 1904. Not *Obeliscus* (*Triptychus*) *niveus* MÖRCH, Mal. Blät., vol. 22, p. 158, 1875. [Both are *Pyramidellas*.]

This species was originally described as *Eulimella nivea*. I have ground the specimen and find but a single fold on the columella. It must therefore be referred to the subgenus *Syrnola*. The specimen

figured measures: Length, 7.5 mm.; diameter, 2.2 mm. Cat. No. 186858, U.S.N.M. (Coll. No. 228). Two specimens of this species collected at Port Alfred (Coll. No. 228). Cat. No. 249705, U.S.N.M., two additional specimens from Port Alfred (Coll. No. 977).

**PYRAMIDELLA (SYRNOLA) MINOR** Smith.

Cat. No. 186859, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 229).

**PYRAMIDELLA (SYRNOLA), species ?**

Cat. No. 187074, U.S.N.M., contains a young individual from Port Alfred which we are unable to refer to any of the known forms (Coll. No. 614).

**PYRAMIDELLA (SYRNOLA) TARPEIA**, new species.

Plate 14, fig. 6.

Shell small, elongate-conic, subdiaphanous. Nuclear whorls small, very obliquely immersed in the first of the succeeding turns, above which the rounded, tilted edge of the last volution only projects. Postnuclear whorls high between the sutures, slightly rounded, feebly shouldered at the summit; marked by retractive lines of growth, and exceedingly fine, spiral striations. Sutures well impressed. Periphery of the last whorl well rounded. Base somewhat prolonged, well rounded, marked like the spire. Aperture oval, posterior angle acute, outer lip thin, inner lip very short, decidedly curved, slightly reflected, appressed; parietal wall covered with a moderately thick callus.

The type and two specimens, Cat. No. 187077, U.S.N.M., come from Port Alfred (Coll. No. 618). The type has almost six postnuclear whorls, and measures: Length, 3.7 mm.; diameter, 1.3 mm.

**PYRAMIDELLA (SYRNOLA) HERA**, new species.

Plate 15, fig. 6.

Shell elongate-conic, milk white. Nuclear whorls more than one, obliquely immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls very slightly rounded, very feebly shouldered at the summit, marked by rather coarse lines of growth and exceedingly fine spiral striations. The preceding whorl shines through the substance of the succeeding turns near the summit and appears as a band a little differently colored than the rest of the shell. Sutures well marked. Periphery well rounded. Base slightly prolonged, well rounded. Aperture ovate; posterior angle acute; outer lip thin; the inner lip, short; reflected over and appressed to the base; parietal wall covered with a thin callus.



The type and another specimen, Cat. No. 249709, U.S.N.M., come from Port Alfred (Coll. No. 981). The type has six postnuclear whorls, and measures: Length, 4 mm.; diameter, 1.2 mm

Genus *TURBONILLA* Risso.

*TURBONILLA* (*PTYCHEULIMELLA*) *ERNA*, new species.

Plate 16, fig. 2.

Shell very small, elongate-conic, bluish white, translucent. Nuclear whorls at least two, well rounded, forming a depressed helicoid spire, the axis of which is almost at right angles to the axis of the succeeding turns. The nuclear spire is about one-fourth immersed in the first of the succeeding whorls. Postnuclear whorls slightly rounded, strongly appressed at the summit, marked by extremely feeble, almost vertical axial ribs which are so poorly defined that they can scarcely be counted. In addition to the axial sculpture, the entire surface of the whorls is marked by closely spaced, microscopic, spiral striations. Sutures well constricted. Periphery of the last whorl somewhat angulated. Base short, well rounded. Aperture elongate-ovate; posterior angle obtuse, outer lip thin, inner lip strongly curved and slightly reflected; parietal wall covered by a thin callus.

The type and another specimen, Cat. No. 250371, U.S.N.M., come from Port Alfred (Coll. No. 1244). The type has seven postnuclear whorls, and measures: Length, 3 mm.; diameter, 0.7 mm.

*TURBONILLA* (*CHEMNITZIA*) *GEMMULA* Smith.

Cat. No. 186847, U.S.N.M., contains two specimens of this species from Port Alfred (Coll. No. 214).

*TURBONILLA* (*CHEMNITZIA*) *KRAUSSI* Clessin.

Cat. No. 186843*a*, U.S.N.M., one specimen from Port Alfred (Coll. No. 210*a*).

*TURBONILLA* (*PSELLIOPYRA*) *ADABA*, new species.

Plate 15, fig. 5.

Shell broadly elongate-conic, white. Nuclear whorls well rounded, smooth, obliquely immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls almost flattened, very strongly, tabulatedly shouldered at the summit, crossed by strong, very regular, somewhat sinuous, slightly protractive, axial ribs, of which 20 occur upon the second and third, 22 upon the fourth and fifth, 24 upon the sixth, and 28 upon the penultimate turn. These ribs extend prominently from the shoulder, which they render crenulated, to the periphery of the turn. Inter-costal spaces a little wider than the rib. A spiral cord in the intercostal is present about one-fifth of the space between the sutures

posterior to the suture, which is equal in strength to the spiral cord at the periphery. The sulcus between the two spiral cords and between the anterior cord and the periphery of the last whorl are marked by the continuations of the axial ribs. Sutures strongly channeled. Periphery of the last whorl rendered decidedly angulated by the spiral cord. Base rather long, well rounded, narrowly umbilicated. The entire surface is marked by slender spiral striations. Aperture broadly oval; outer lip moderately thick; inner lip somewhat curved and slightly revolute; columella provided with an oblique fold at its insertion; parietal wall glazed with a thick callus.

The type, Cat. No. 250374, U.S.N.M., comes from Port Alfred (Coll. No. 1247). It has eight postnuclear whorls, and measures: Length, 5 mm.; diameter, 1.8 mm. Cat. No. 250361, U.S.N.M., contains the nucleus of a young specimen from the same place (Coll. No. 1234).

**TURBONILLA (STRIOTURBONILLA) SECURA, new name.**

Plate 17, fig. 7.

*Turbonilla obeliscus* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 406, 1861. Not *Chemnitzia obeliscus* C. B. ADAMS, Contr. Conch., pp. 72-73, 1850. (Also a *Strioturbonilla*).

Shell quite large, broadly conic, bluish-white. Nuclear whorls one and three-fourths, rather large, forming a well-rounded, depressed, helicoid spire, the axis of which is at right angles to that of the succeeding turns. Postnuclear whorls moderately rounded, narrowly shouldered at the summit, marked by rather strong, low, rounded, decidedly protractive, axial ribs, of which 16 occur upon the first to third, 18 upon the fourth to sixth, 20 upon the seventh, 24 upon the eighth and ninth, 26 upon the tenth and penultimate whorl. The spaces between the axial ribs are narrower than the ribs, and not very strongly impressed. Suture slightly channeled. Periphery of the last whorl well rounded; base short, well rounded. Entire surface of base and spire marked by rather strong incremental lines and very fine, closely spaced, wavy, spiral striations. Aperture subquadrate, posterior angle obtuse; outer lip thin, showing the external sculpture within; inner lip decidedly oblique and slightly revolute; parietal wall glazed with a thin callus.

Cat. No. 165, U.S.N.M., contains Gould's type, collected by William Stimpson on the North Pacific Exploring Expedition, at Simons Bay, Cape of Good Hope. It has 12 postnuclear whorls and measures: Length, 11.1 mm.; diameter, 3 mm. Cat. No. 186843, U.S.N.M., three specimens from Port Alfred (Coll. No. 210).

**TURBONILLA (STRIOTURBONILLA) LAEVOCOSTATA Sowerby.**

Cat. No. 186845, U.S.N.M., contains six specimens of this species from Port Alfred (Coll. No. 212).

**TURBONILLA (PYRGOLAMPROS) ANGEA, new species.**

Plate 9, fig. 3.

Shell elongate-conic, brownish yellow. (Nuclear whorls decollated.) Postnuclear whorls very slightly rounded, feebly shouldered at the summit marked by rather broad, low, somewhat protractive axial ribs, of which 16 occur upon the second, 18 upon the third to fifth; 20 upon the sixth; and 22 upon the penultimate turn. These ribs are about double the width of the spaces that separate them. In addition to the ribs, the whorls are marked by exceedingly fine, microscopic, spiral striations. Periphery of the last whorl well rounded. Base moderately long, well rounded, crossed by the very feeble continuations of the axial ribs and exceedingly fine, spiral striations. Aperture oval; posterior angle acute; outer lip thin; inner lip very short, slightly revolute and appressed, provided with a weak fold at its insertion; parietal wall glazed with a thin callus.

The type and another specimen, Cat. No. 186844a, U.S.N.M., come from Port Alfred (Coll. No. 211). The type has seven and one-half postnuclear whorls, and measures: Length, 5 mm.; diameter, 1.7 mm. Cat. No. 250375, U.S.N.M., contains three specimens from the same locality (Coll. No. 1248).

**TURBONILLA (PYRGISCUS) HELENA, new species.**

Plate 14, fig. 1.

Shell small, elongate-conic, golden brown. Nuclear whorls, at least two, forming a depressed helicoid spire which is obliquely immersed in the first of the succeeding turns, above which a portion of the last two whorls only projects. Postnuclear whorls strongly, tabulatedly shouldered at the summit, well rounded, somewhat constricted at the sutures, marked by very regular, slightly retractive, axial ribs, which are almost as wide as the spaces that separate them. Of these ribs, there are about 24 on the first and second, 22 upon the third, 26 upon the fourth, 30 upon the fifth, and 32 upon the penultimate whorl. The ribs render the summit of the whorls crenulated. Intercostal spaces strongly impressed, marked by numerous fine, equal, and equally spaced, spiral striations, of which about 30 occur between the sutures on the penultimate turn. Sutures very strongly constricted, base moderately long, well rounded, marked by the continuations of the axial ribs, which become enfeebled as they approach the umbilical chink, and incised, spiral lines equaling those on the spire in spacing and strength. Aperture oval, posterior angle rendered decidedly obtuse by the shoulder at the summit. Outer lip thin, showing the external sculpture within; inner lip strongly curved, reflected over and appressed to the base, provided with a weak, oblique fold at its insertion. Parietal wall covered by a thin callus.

The type and another specimen, Cat. No. 227732, U.S.N.M., come from Port Alfred (Coll. No. 827). The type has seven postnuclear whorls, and measures: Length, 3.9 mm.; diameter, 1.1 mm.

**TURBONILLA (PYRGISCUS) ATOSSA, new species.**

Plate 15, fig. 1.

Shell elongate-conic, bluish-white. Nuclear whorls more than two, smooth, the early portion obliquely immersed in the later. Post-nuclear whorls strongly shouldered at the summit, marked by well-rounded, somewhat retractive, strong, axial ribs, of which 16 occur upon the first, 18 upon the second to fourth, and 20 upon the penultimate turn. These ribs extend strongly from the summit of the whorls to the umbilical chink. Intercostal spaces about twice as broad as the ribs, crossed by fine, incised, spiral lines, of which 7 occur between the shoulder at the summit and the suture on the first and second, 9 upon the third, 15 upon the fourth and the penultimate turn. The spaces separating these spiral striations are about twice as wide as the striations. Sutures strongly constricted. Periphery of the last whorl somewhat inflated, well rounded. Base moderately long, well rounded, narrowly umbilicated, marked by the strong continuations of the axial ribs and fine spiral striations, which become a little closer spaced on the anterior portion than at the periphery. Aperture pear-shaped; posterior angle obtuse; outer lip somewhat sinuous, thick within, sloping to a thin edge; columella slender, curved, reflected, provided with an oblique fold at its insertion; parietal wall covered with a thick callus which gives the peristome a complete aspect.

The type, Cat. No. 249700, U.S.N.M., comes from Port Alfred (Coll. No. 972). It has six postnuclear whorls and measures: Length, 4.4 mm.; diameter, 1.7 mm. Cat. No. 249695, U.S.N.M., contains a young specimen from the same locality (Coll. No. 967).

**TURBONILLA (PYRGISCUS), species?**

Cat. No. 186851, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 218), which has very strong protractive axial ribs, numerous, finely incised, spiral striations in the intercostal spaces, and a very pronounced plait on the pillar. I refrain from giving it a name until more complete material may be at hand.

**TURBONILLA (PYRGISCUS), species ?**

Cat. No. 186851a, U.S.N.M., contains a badly-worn specimen from Port Alfred (Coll. No. 218a). It is much smaller than the last one referred to, and is probably a new species.



## TURBONILLA (PYRGISCUS) TRITONIA, new species.

Plate 19, fig. 4.

Shell very small, slender, elongate-conic, white. Nuclear whorls two and one-half; depressed helicoid, having their axis at a right angle to that of the succeeding turns, in the first of which they are about one-third immersed. Postnuclear whorls slightly rounded, weakly shouldered at the summit; marked by strong, slightly curved, almost vertical axial ribs, of which 16 occur upon the first and second, 18 upon the third and fourth, and 20 upon the penultimate turn. The intercostal spaces, which are about as wide as the ribs, are crossed by 10 equally spaced, narrow, incised, spiral grooves, of which the third one below the summit is about twice as wide as the rest, which are subequal. Periphery of the last whorl well rounded. Base moderately long, well rounded, marked by the continuations of the axial ribs, which extend feebly to the umbilical region and about 15 incised spiral lines, which grow successively weaker and closer spaced from the periphery to the umbilical region. Aperture oval; outer lip thin; inner lip strongly curved and reflected, provided with a strong fold at its insertion; parietal wall covered with a thick callus.

The type and two additional specimens, Cat. No. 187046, U.S.N.M., come from Port Alfred (Coll. No. 584). The type has five and one-half whorls, and measures: Length, 2 mm.; diameter, 0.6 mm. Cat. No. 250370, U.S.N.M., contains two additional specimens from Port Alfred (Coll. No. 1243).

## TURBONILLA (PYRGISCUS) ZENOBIA, new species.

Plate 16, fig. 6.

Shell elongate-conic, bluish-white. Nuclear whorls more than two, smooth, forming a depressed helicoid spire, the axis of which is at right angles to that of the succeeding turns, above the first of which the tilted edge of the last two volutions only project. Postnuclear whorls slightly rounded and feebly shouldered at the summit, marked with strong, rounded, sinuous and protractive axial ribs, which extend strongly from the summit of the whorls to the suture. Of these ribs, 16 occur upon the first and second, 18 upon the third to fifth, 20 upon the sixth and seventh, and 22 upon the penultimate turn. Intercostal spaces a little wider than the ribs, marked by well incised, spiral lines which pass over the intercostal spaces and the ribs. Of these lines, 8 appear on the first and second, 10 upon the third, 12 upon the fourth, 15 upon the fifth, 16 upon the sixth, 17 upon the seventh, and 18 upon the penultimate turn. Sutures strongly impressed. Periphery of the last whorl well rounded. Base short, well rounded, marked by 11 slender spiral threads, which are about one-half as wide as the spaces that separate them and diminish in



size consecutively from the periphery to the umbilical chink. Aperture subquadrate; posterior angle obtuse; outer lip thin, showing the external sculpture within; columella short, very oblique, slightly revolute, provided with an obsolete fold at its insertion; parietal wall covered with a thin callus.

The type and another specimen, Cat. No. 249701, U.S.N.M., come from Port Alfred (Coll. No. 973). The type has nine whorls and measures: Length, 4 mm.; diameter, 1 mm. Cat. No. 249699, U.S.N.M., contains two additional specimens from the same locality. (Coll. No. 971).

**TURBONILLA (PYRGISCUS) TINCTA** Sowerby.

Cat. No. 186844, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 211).

**TURBONILLA (PYRGISCUS) MAIA**, new species.

Plate 14, fig. 3.

Shell elongate-conic, milk white. Nuclear whorls very small, at least two having their axis at a right angle to that of the succeeding turns, in the first of which they are about one-third immersed. Post-nuclear whorls inflated, strongly rounded, marked by narrow scalariiform, slightly protractive axial ribs, of which 16 occur upon the first and second, 18 upon the third to sixth, 20 upon the seventh, and 26 upon the penultimate turn. Upon this they become inflated and somewhat irregular; intercostal spaces about twice, to two and one-half times, as wide as the ribs, marked by strongly incised, spiral lines, of which 5 occur upon the first and second, 6 upon the third, 7 upon the fourth, and 8 upon the fifth and sixth, 13 upon the seventh, while upon the penultimate turn they become exceedingly irregular, both as to width, number, and spacing. Sutures strongly constricted. Periphery of the last whorl inflated, well rounded. Base rather short, well rounded, narrowly umbilicated, marked by the feeble continuations of the axial ribs and numerous spiral striations. Aperture oval; posterior angle obtuse; outer lip thin; inner lip decidedly curved; slightly reflected, free; parietal wall glazed with a thin callus.

The type, Cat. No. 187049, U.S.N.M., comes from Port Alfred (Coll. No. 587). It has eight and one-half post-nuclear whorls, and measures: Length, 7.1 mm.; diameter, 2.3 mm. Two additional lots are in the collection of the U.S. National Museum, all from Port Alfred. Cat. No. 249698, one specimen (Coll. No. 970). Cat. No. 250373, the tip of a young specimen (Coll. No. 1246).

**TURBONILLA (PYRGISCUS) TEFUNTA**, new species.

Plate 15, fig. 2.

Shell elongate-conic, milk white, with a narrow pale yellow band a little posterior to the middle on each whorl. Nuclear whorls decolored. Postnuclear whorls slightly rounded, feebly shouldered at the

summit, marked by rather strong, somewhat curved, slightly protractive axial ribs, of which 16 occur upon the first, 18 upon the second, 20 upon the third to fifth, 22 upon the sixth, and 24 upon the penultimate turn. These ribs are about as wide as the spaces that separate them, and render the summit of the whorls crenulated. Intercostal spaces crossed by 14 slender spiral threads, of which the 9 above the suture are equal and equally spaced, while the 3 remaining ones near the summit are much closer spaced. Sutures strongly marked. Periphery of the last whorl well rounded. Base moderately long, well rounded, marked by the continuation of the axial ribs, which extend to the umbilical chink, and about 25 spiral lirations, which become more closely spaced and less strongly developed from the periphery to the umbilical area. The intercostal spaces at the periphery are free from spiral sculpture and cause this to appear as a series of broad, strongly impressed pits. Aperture oval; posterior angle obtuse; outer lip rather thick; inner lip curved and decidedly reflected, provided with a fold at its insertion; parietal wall covered by a moderately thick callus.

The type and another specimen, Cat. No. 249697, U.S.N.M., come from Port Alfred (Coll. No. 969). The type has eight postnuclear whorls, and measures: Length, 4.6 mm.; diameter, 1.3 mm.

**TURBONILLA (PYRGISCUS) APSA, new species.**

Plate 16, fig. 4.

Shell elongate-conic, thin, semitranslucent, bluish white. Nuclear whorls at least two, rather large, depressed helicoid, well rounded, about half immersed in the first of the succeeding turns. Postnuclear whorls moderately well rounded, shouldered at the summit, which is slightly exserted, and marked by obsolete axial ribs which are best expressed on the early turns. Of these ribs about 18 are indicated upon the second, 22 upon the third and fourth, 28 upon the fifth, and 20 upon the sixth and penultimate turns. Intercostal spaces scarcely visible, the ribs appearing a little more opaque than the spaces between them. In addition to the axial sculpture, the whorls are marked between the sutures by about eleven slender spiral striations which are of somewhat varying strength and spacing, the region immediately below the summit being free of spiral sculpture. Sutures well impressed. Periphery well rounded. Base well rounded, marked by about 16 slender spiral lirations which are strongest near the periphery and grow weaker and closer spaced towards the umbilical chink, where they are very densely massed. Aperture oval; posterior angle acute; outer lip thin; inner lip strongly curved, slightly reflected, provided with a weak fold at its insertion. Parietal wall covered with a thick callus which renders the peritreme almost complete.

The type and another specimen, Cat. No. 249706, U.S.N.M., come from Port Alfred (Coll. No. 78). The type has eight postnuclear whorls, and measures: Length, 4.9 mm.; diameter 1.5 mm.

**TURBONILLA (PYRGISCUS), species?**

Cat. No. 249694, U.S.N.M., contains two worn specimens from Port Alfred, too poor to determine (Coll. No. 966).

**TURBONILLA (DUNKERIA) TEGULATA Sowerby.**

Cat. No. 186846, U.S.N.M., contains three specimens of this species from Port Alfred (Coll. No. 213).

**TURBONILLA (CINGULINA) TRACHEALIS Gould.**

Plate 17, fig. 1.

*Chemnitzia (Polyspirella) trachealis* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 407, 1861.

Shell elongate-conic, yellowish-white. Nuclear whorls large, planorboid, well rounded, smooth, obliquely immersed in the first of the succeeding turns, above which only the tilted edge of the last two volutions projects. Postnuclear whorls moderately rounded, shouldered at the summit, marked by three strong spiral cords which slope abruptly posteriorly and gently anteriorly. These cords are about twice as wide as the spaces that separate them. Beginning with the third to last turn, the suture falls gradually more and more anterior to the periphery, exposing a portion of the base, which appears as a flattened band above the suture. In addition to the spiral cords, the whorls are marked by numerous, slender, raised, axial threads in the depressed spaces between the cords. These threads are about one-fourth as wide as the spaces that separate them. Suture scarcely differentiated from the other grooves. Periphery of the last whorl well rounded. Base rather short, well rounded, marked by incremental lines and exceedingly fine, spiral striations. Aperture broadly ovate; posterior angle acute; outer lip thin, showing the external sculpture within; columella somewhat twisted, provided with an obsolete fold at its insertion.

Gould's type, Cat. No. 165*a*, U.S.N.M., which was collected by William Stimpson on the North Pacific exploring expedition at Simon's Bay, Cape of Good Hope, has 9 postnuclear whorls and measures: Length, 5.7 mm.; diameter, 2 mm. A specimen having 12 whorls but minus the nucleus measures: Length, 12.2 mm.; diameter, 2.5 mm. Four additional lots of this species are in the collection of the United States National Museum from South Africa as follows: Cat. No. 250398*a*, four specimens (Coll. No. 1271*a*). Cat. No. 250399, three specimens (Coll. No. 1272). Cat. No. 187048, one specimen (Coll. No. 586). Cat. No. 187047, three specimens (Coll. No. 585).

## TURBONILLA (CINGULINA) AGLAIA, new species.

Plate 17, fig. 3.

Shell elongate-conic, subdiaphanous, bluish-white. Nuclear whorls small, at least two; depressed helicoid, obliquely one-third immersed in the first of the succeeding turns. Postnuclear whorls moderately rounded, marked by three strong spiral striations between the sutures on the early whorls, while on the later ones the peripheral cord becomes completely exposed in the suture, giving these whorls four spiral cords. These spiral cords are truncated posteriorly and slope gently anteriorly. They are a little wider than the grooves that separate them. The grooves are crossed by numerous, very slender, somewhat protractive axial riblets. Sutures scarcely differentiated from the spiral grooves. Periphery of the last whorl bounded posteriorly by a spiral groove; anteriorly there is no limiting groove to denote the peripheral cord, which is apparent in the suture on the preceding turns, the periphery here passing evenly into a short, well-rounded base, which is marked by exceedingly fine, spiral striations and lines of growth. Aperture subquadrate; posterior angle obtuse; outer lip thin, showing the external sculpture within, rendered wavy at the edge by the external sculpture; inner lip decidedly curved and slightly reflected, provided with a weak fold at its insertion; parietal wall glazed with a thin callus.

The type and two specimens, Cat. No. 186850, U.S.N.M., come from Port Alfred (Coll. No. 217). The type has eight and one-half postnuclear whorls, and measures: Length, 5.3 mm.; diameter, 1.5 mm. Cat. No. 250398, U.S.N.M., contains two additional specimens from Port Alfred (Coll. No. 1271).

## TURBONILLA (CINGULINA) PELLUCIDA Sowerby.

Cat. No. 186854, U.S.N.M., contains three specimens of this species, which was described as *Cioniscus pellucidus* Sowerby, from Port Alfred (Coll. No. 222).

## TURBONILLA (CINGULINA) CALLISTA, new species.

Plate 17, fig. 2.

Shell elongate-conic, very slender, white. Nuclear whorls at least two, small, depressed helicoid, obliquely one-third immersed in the first of the succeeding turns. Postnuclear whorls well rounded, marked between the sutures by three very strong, incised, spiral grooves, of which one is immediately below the summit, the second on the middle of the whorls, and the third about as far posterior to the suture as the first is anterior to the summit. The axial sculpture consists of vertical incremental lines only. Periphery and base of the last whorl well rounded, marked by incremental lines only. Aperture oval; posterior angle acute; outer lip thin, showing the



external sculpture within; inner lip very slender, decidedly curved and reflected; free only at the extreme anterior portion, the rest appressed; parietal wall glazed with a thin callus.

The type and two specimens, Cat. No. 187054, U.S.N.M., come from Port Alfred (Coll. No. 592). The type has nine postnuclear whorls, and measures: Length, 4.2 mm.; diameter, 1 mm.

**TURBONILLA (CARELIOPSIS) CARIFA, new species.**

Plate 20, fig. 4.

Shell small, elongate-conic, semitranslucent, bluish-white, nuclear whorls, at least two, large and smooth, forming a depressed helicoid spire, which is a little more than half obliquely immersed in the first of the succeeding turns. Postnuclear whorls well rounded, feebly shouldered at the summit, marked by quite regular, equal and equally spaced, fine spiral lirations, of which 9 occur upon the first and second, 10 upon the third, and 11 upon the penultimate turn between the sutures. Suture decidedly constricted. Periphery of the last whorl well rounded. Base moderately long, very narrowly umbilicated, a little less strongly rounded than the space between the sutures, marked by about 11 spiral lirations of about the same strength and spacing as those occurring on the spire. In addition to the spiral sculpture, the whorls are marked by exceedingly fine, decidedly retractively slanting lines of growth. Aperture moderately large, oval; posterior angle obtuse; outer lip thin, showing the external sculpture within; inner lip strongly curved, very slender, reflected over and attached to the body whorl, except the extreme anterior portion, which is free; parietal wall covered by a thick callus.

The type, and another specimen, Cat. No. 250390, U.S.N.M., comes from Port Alfred (Coll. No. 1263). The type has five postnuclear whorls, and measures: Length, 2.1 mm.; diameter, 0.7 mm.

**TURBONILLA (MORMULA) CIFARA, new species.**

Plate 16, fig. 5.

Shell large and robust, elongate-conic, bluish white. Nuclear whorls decollated. Postnuclear whorls slightly rounded, roundly shouldered at the summit and weakly contracted at the suture, marked by rather strong, somewhat irregular, slightly retractive, axial ribs and an occasional varix, marking the fusion of a number of ribs. The varices are irregularly disposed. Of the axial ribs, 22 occur upon the first and second, and 20 upon all the remaining turns but the penultimate, which has 22; on this turn they are rather irregularly disposed and less strongly developed. In addition to the axial ribs the whorls are crossed by weakly incised spiral lines, which are of somewhat varying strength. There are probably 50 of these between the sutures. These lines and the feeble lines of growth between the



ribs lend the whorls a cloth-like texture. Suture well impressed. Periphery of the last whorl feebly angulated. Base short, moderately rounded, marked by the continuation of the axial ribs and spiral lirations, the latter of varying strength. Aperture irregularly oval; posterior angle obtuse; outer lip moderately thin, showing the external sculpture within; inner lip very oblique, almost straight, reflected over and appressed to the body whorl, except at the extreme anterior tip, which is free. The columella is provided with a feeble fold at its insertion. Parietal wall glazed with a thin callus.

The type, Cat. No. 249715, U.S.N.M., comes from Port Alfred (Coll. No. 987). It has nine postnuclear whorls, and measures: Length, 15 mm.; diameter, 4.7 mm.

Two additional specimens of this species come from Port Alfred. They are listed as Cat. No. 186842, U.S.N.M. (Coll. No. 209), and Cat. No. 249702, U.S.N.M., (Coll. No. 974).

**TURBONILLA (MORMULA) DECORA** Smith.

Cat. No. 186849, U.S.N.M., contains a specimen of this species from Port Alfred (Coll. No. 216). Another specimen from the same locality is listed as Cat. No. 250377, U.S.N.M. (Coll. 1250).

**TURBONILLA (PERISTICHIA) BATHYRAPHE** Sowerby.

Cat. No. 186848, U.S.N.M., contains one specimen of this species from Port Alfred (Coll. No. 215).

Genus **ODOSTOMIA** Fleming.

**ODOSTOMIA (ODOSTOMELLA) FARICA**, new species.

Plate 18, fig. 4.

Shell small, elongate-ovate, milk white, with three narrow chestnut bands, the first of which encircles the posterior fourth of the space between the sutures; the second is somewhat anterior to the periphery, while the third is about one-half of the distance of the space between the anterior extremity of the base and the periphery, posterior to the anterior extremity. Nuclear whorls small, polished, deeply immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls well rounded, narrowly shouldered at the summit, marked by slender, almost vertical, axial riblets, which are about two-thirds as wide as the spaces that separate them. Of these riblets, 22 occur upon the second, 24 upon the third, and 26 upon the penultimate turn. Suture strongly constricted. Periphery of the last whorl well rounded. Base moderately well rounded, marked by the feeble continuations of the axial ribs, which extend to the umbilical chink. Aperture oval; posterior angle obtuse; outer lip thin, showing the external sculpture within; inner lip slightly curved, reflected, and appressed to the

preceding turn for half its length; parietal wall glazed with a thin callus.

The type, Cat. No. 250369, U.S.N.M., comes from Port Alfred (Coll. No. 1242), has four postnuclear whorls, and measures: Length, 1.5 mm.; diameter, 0.6 mm.

*ODOSTOMIA (EGILINA) TURTONI*, new species.

Plate 19, fig. 3.

Shell small, elongate-conic, milk white. Nuclear whorls, at least two, deeply, obliquely, immersed in the first of the succeeding turns. Postnuclear whorls moderately rounded, feebly shouldered at the summit; marked by very regular, somewhat sinuous, slightly protractive axial ribs, of which 24 occur upon the first, 26 upon the second and third, and about 40 upon the last turn. These ribs are separated by well-impressed intercostal spaces which are about equal to the axial ribs in width. In addition to the spiral sculpture the whorls are marked between the sutures by a strong spiral cord which adjoins the suture. The summit of the whorls is rendered slightly crenulated by the curving of the ribs. Sutures strongly impressed; periphery of the last whorl marked by a narrow sulcus, which is crossed by the continuations of the axial ribs; base short, moderately umbilicated, marked by feeble, thread-like continuations of the axial ribs and six low, well-rounded, weak spiral threads, which diminish greatly in size and spacing from the periphery to the umbilical area, where they are quite obsolete. Aperture quite large, oval; posterior angle acute; outer lip thin, showing the external sculpture within; inner lip strongly curved and slightly reflected; parietal wall covered by thick callus.

The type and three specimens, Cat. No. 227733, U.S.N.M., (Coll. No. 828), come from Port Alfred. The type has almost five postnuclear whorls, and measures: Length, 2 mm.; diameter, 0.9 mm.

*ODOSTOMIA (PYRGULINA) ARFICA*, new species.

Plate 18, fig. 7.

Shell elongate-ovate, rather solid, bluish white. Nuclear whorls decollated. Postnuclear whorls well rounded, strongly shouldered at the summit, marked by stout, well-rounded, somewhat sinuous, decidedly protractive, axial ribs, which are about as wide as the spaces that separate them. Of these ribs, 14 occur upon the first, 16 upon the second, 18 upon the third, and 22 upon the penultimate turn. These ribs render the summit of the whorls decidedly crenulated. In addition to the ribs the intercostal spaces are marked between the sutures by exceedingly fine, closely spaced, spiral striations, of which about 35 are present upon the third turn. Sutures strongly impressed. Periphery of the last whorl well rounded. Base moder-

ately long, narrowly umbilicated, well rounded, marked by the feeble continuation of the axial ribs, and numerous spiral striations. Aperture oval; posterior angle obtuse; outer lip rather thick; inner lip decidedly curved, and somewhat reflected, provided with a very strong, oblique fold at its insertion; parietal wall covered by a thick callus, which renders the peritreme practically complete.

The type, and another specimen, Cat. No. 249693, U.S.N.M., come from Port Alfred (Coll. No. 965); the type has five postnuclear whorls, and measures: Length, 4 mm.; diameter, 1.9 mm.

*ODOSTOMIA (MIRALDA) AGANA*, new species.

Plate 19, fig. 8.

Shell conic, white. Nuclear whorls, at least two, deeply, obliquely immersed in the first of the succeeding turns, above which the tilted edge of the last volution projects. Postnuclear whorls moderately rounded, shouldered at the summit, ornamented with slender, protractive, axial ribs, of which 16 occur upon the first and second, 18 upon the third, and 22 upon the penultimate turn. These ribs extend prominently to the summit of the whorls, which they render crenulated. In addition to the axial sculpture the whorls are marked by two prominent spiral cords between the sutures, of which the first occupies the middle of the turns, while the second is halfway between this and the suture. The intersections of the axial ribs and the spiral cords form well-rounded nodules. Periphery of the last whorl marked by a sulcus. Sutures strongly constricted. Base moderately long, somewhat produced, narrowly umbilicated, provided with a strong spiral cord, which bounds the peripheral sulcus. The anterior part of the base is smooth, excepting minute lines of growth, which are also apparent on the spire. Aperture oval; outer lip very thin, showing the external sculpture within, decidedly sinuous at the edge; inner lip strongly curved, slightly reflected, free, provided with a strong fold at its insertion; parietal wall glazed with a thin callus.

The type, Cat. No. 186848*a*, U.S.N.M., comes from Port Alfred (Coll. No. 215*a*). It has 5 postnuclear whorls, and measures: Length, 2.4 mm.; diameter, 1 mm. Cat. No. 227728, U.S.N.M., contains three specimens from the same locality (Coll. No. 823).

*ODOSTOMIA (MENESTHO) CARIFA*, new species.

Plate 18, fig. 5.

Shell very small, subcylindric, cream yellow. Nuclear whorls well rounded, smooth, deeply, obliquely inserted in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls strongly rounded, appressed at the summit, marked by two strongly incised, spiral grooves, of which the first is

situated at the anterior extremity of the posterior fourth, between the sutures, while the second is about as far posterior to the suture. The posterior of these two grooves is bounded posteriorly by a slender raised cord. In addition to this spiral sculpture the whorls are marked by numerous fine spiral striations and decidedly retractive lines of growth. The latter assume somewhat the appearance of feeble riblets between the slender cord and the summit. Sutures strongly constricted. Periphery of the last whorl well rounded. Base moderately long, well rounded, with a very fine umbilical perforation; marked by the continuation of the lines of growth and numerous fine spiral striations, which are a little stronger than those on the spire. Aperture broadly oval; posterior angle very obtuse; outer lip very oblique, thin; inner lip very strongly curved and appressed to the preceding turn; except the extreme anterior portion, which is free; parietal wall glazed with a thin callus.

The type, Cat. No. 250391, U.S.N.M., comes from Port Alfred (Coll. No. 1264), has four postnuclear turns, and measures: Length, 1.5 mm.; diameter, 0.7 mm.

**ODOSTOMIA (MENESTHO) RIFACA, new species.**

Plate 18, fig. 3.

Shell very elongate-ovate, milk white. Nuclear whorls well rounded, smooth, immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls moderately rounded, having a strongly impressed spiral groove a little below the summit, which causes this to appear as a well-rounded spiral cord. The rest of the surface between the sutures is marked by numerous very fine spiral lirations, and exceedingly fine axial lines of growth. Sutures strongly constricted. Periphery of the last whorl somewhat inflated, well rounded. Base slightly attenuated, very narrowly umbilicated, well rounded, marked by the continuation of the lines of growth and spiral lirations which equal those of the spire in strength and spacing. Aperture irregularly ovate; posterior angle acute; outer lip thin, oblique; inner lip decidedly curved, reflected over and appressed to the preceding turn, the extreme anterior tip only being free. A strong oblique fold marks the insertion of the columella. Parietal wall glazed by a thin callus.

The type, Cat. No. 250365, U.S.N.M., comes from Port Alfred (Coll. No. 1238). It has five postnuclear whorls, and measures: Length, 1.9 mm.; diameter, 0.9 mm.

**ODOSTOMIA (MENESTHO) FICARA, new species.**

Plate 16, fig. 1.

Shell broadly elongate-conic, rather thick, bluish white, Nuclear whorls small, deeply, obliquely immersed in the first of the postnuclear turns, above which a part of the last two volutions project. Postnu-



clear turns well rounded, ornamented with strong spiral keels, of which two occur upon the first and second, while upon the third the anterior one is divided by a slender incised line which gradually increases in strength on the succeeding turns, splitting this cord into two equal and equally strong cords equaling the posterior one, on the last turn. On the last two turns the infraperipheral cord makes its appearance in the suture. We have, therefore, four cords shown between the sutures on the last turn. Summit of the whorls tabulatedly shouldered, the first cord beginning at the angle of the shoulder. The grooves separating the spiral cords are strongly impressed. The one immediately posterior to the supraperipheral cord is a little stronger than the rest. In addition to the spiral sculpture the whorls are marked by feeble lines of growth on the spire, which appear strongest in the spiral grooves. Sutures strongly constricted. Periphery of the last whorl marked by a spiral sulcus. Base moderately long, well rounded, very narrowly umbilicated, marked by 11 spiral cords, the five anterior to the periphery being much stronger than the six remaining, which are very fine. Aperture oval; posterior angle obtuse; outer lip thin, rendered sinuous by the spiral sculpture, showing the external sculpture within; inner lip short, strongly curved, reflected and appressed to the preceding turn, provided with a very strong oblique fold opposite the umbilical chink; parietal wall covered by a strong callus.

The type, Cat. No. 271615, U.S.N.M., comes from Port Alfred (Coll. No. 1599). It has six postnuclear whorls, and measures: Length, 3.3 mm.; diameter, 1.5 mm.

*ODOSTOMIA (EVALEA) LUCIDA* Sowerby.

Cat. No. 186853, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 220).

*ODOSTOMIA (EVALEA) LAVERTINAE* Smith.

Cat. No. 186852, U.S.N.M., contains six specimens from Port Alfred (Coll. No. 219).

We have seen 33 additional specimens from Port Alfred in Colonel Turton's collection (Coll. No. 1589).

*ODOSTOMIA (EVALEA) AETHRA*, new species.

Plate 19, fig. 7.

Shell elongate-conic, white. Nuclear whorls deeply immersed in the first of the succeeding turns, above which a very small portion of the tilted edge of the last volution only projects. Postnuclear whorls well rounded; feebly shouldered, at the summit; marked with fine, incremental lines, and exceedingly fine, microscopic, spiral striations. Periphery of the last whorl somewhat inflated, feebly



angulated. Base rather short, narrowly umbilicated, well rounded, marked like the spire. Aperture oval; posterior angle obtuse; outer lip thin; inner lip oblique, slightly curved, appressed, provided with a strong fold at its insertion; parietal wall covered with a thick callus.

The type and another specimen, Cat. No. 186852*a*, U.S.N.M., come from Port Alfred (Coll. No. 219). The type has five and one-half postnuclear whorls, and measures: Length, 3 mm.; diameter, 1.5 mm.

**ODOSTOMIA (EVALEA) GEA, new species.**

Plate 19, fig. 1.

Shell small, elongate-conic, white. Nuclear whorls deeply, obliquely immersed in the first of the succeeding turns, giving the shell a truncated appearance. Postnuclear whorls weakly rounded, very strongly shouldered at the summit, marked by vertical lines of growth, and exceedingly fine, microscopic spiral striations. Sutures strongly impressed. Periphery of the last whorl somewhat inflated, feebly angulated. Base well rounded, strongly umbilicated, marked like the spire. Aperture oval; posterior angle acute; outer lip thin, reinforced within by six equal and equally spaced slender, spiral lirations; inner lip almost vertical, slightly curved, feebly reflected, provided with a strong fold at its insertion; parietal wall glazed with a thin callus.

The type and another specimen, Cat. No. 187073, U.S.N.M., come from Port Alfred (Coll. No. 612). The type has almost six postnuclear whorls, and measures: Length, 2.6 mm.; diameter, 1.2 mm.

**ODOSTOMIA (EVALEA) CIFARA, new species.**

Plate 18, fig. 8.

Shell elongate-conic, thin, semitranslucent, strongly umbilicated, bluish white. Nuclear whorls small, immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls moderately well rounded, narrowly, slopingly shouldered at the summit, marked by numerous, very fine, spiral lines, and very slender, almost vertical lines of growth. The limit at the summit of the interior chamber of the whorls shines through the texture of the shell, and causes this to appear as if it had a double suture. Periphery of the last whorl somewhat inflated, strongly rounded. Base rather short, inflated, quite markedly umbilicated, marked like the spire. Aperture rather large, oval; posterior angle acute; outer lip thin; inner lip strongly curved, reflected but free, bearing a strong oblique fold opposite the umbilicus. Parietal wall covered by a moderately thick callus.

The type and two specimens, Cat. No. 250362, U.S.N.M., come from Port Alfred (Coll. No. 1235). The type has six postnuclear whorls, and measures: Length, 3.8 mm.; diameter, 1.8 mm.

We have seen three additional lots of this species which are in Colonel Turton's collection, all from Port Alfred: 29 specimens (Coll. No. 1589); 33 specimens (Coll. No. 1590); 2 specimens (Coll. No. 1599).

**ODOSTOMIA (EVALEA) ACRIFA, new species.**

Plate 16, fig. 3.

Shell elongate-conic, bluish white, with five equal and equally spaced, narrow, yellowish, spiral bands, which correspond with internal lirations. Nuclear whorls depressed helicoid, obliquely immersed in the first of the succeeding turns, above which a very small portion of the tilted edge of the last volution only projects. Postnuclear whorls quite strongly rounded, narrowly shouldered at the summit, marked by rather strong lines of growth, which have a tendency on the later whorls to divide the surface of the shell into riblets at the shoulder, and numerous, very fine, spiral striations. The posterior limit of the interior of each whorl is seen through the texture of the shell and gives this the appearance of having a double suture. Sutures strongly constricted. Periphery of the last whorl inflated and strongly rounded. Base short, conspicuously umbilicated, inflated, well rounded, marked like the spire by lines of growth and fine spiral lines. Aperture broadly ovate; posterior angle acute; outer lip thin, showing five lirations within, between the posterior angle and the periphery; inner lip curved, slightly reflected but distinct, provided with a strong oblique fold opposite the umbilicus; parietal wall covered by a moderately thick callus.

The type, Cat. No. 250364, U.S.N.M., comes from Port Alfred (Coll. No. 1237). It has six postnuclear whorls, and measures: Length, 3.4 mm.; diameter, 1.4 mm.

**ODOSTOMIA (ODOSTOMIA) IRAFCA, new species.**

Plate 18, fig. 2.

Shell minute, translucent, yellowish white. Nuclear whorls deeply immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Postnuclear whorls inflated, strongly rounded, appressed at the summit, marked by rather coarse lines of growth. Sutures strongly constricted. Periphery of the last whorl inflated and also well rounded. Base somewhat attenuated, very slightly umbilicated, marked like the spire. Aperture broadly oval; outer lip thin, somewhat effuse; inner lip strongly curved, somewhat twisted, and strongly reflected, provided with a strong oblique fold opposite the umbilical chink; parietal wall covered with a thin callus.

The type and two specimens, Cat. No. 250363, U.S.N.M., come from Port Alfred (Coll. No. 1236). The type has four postnuclear whorls, and measures: Length, 1.5 mm.; diameter, 0.7 mm.

**ODOSTOMIA (ODOSTOMIA) ICAFRA**, new species.

Plate 18, fig. 1.

Shell small, quite regularly conic, semitranslucent, bluish white. Nuclear whorls obliquely immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Post-nuclear whorls slightly rounded, narrowly shouldered at the summit, marked by exceedingly fine lines of growth. The posterior limit of the interior of the whorl shines through the substance of the shell, and causes the whorls to appear as if they had a double suture. Sutures feebly impressed. Periphery of the last whorl well rounded. Base slightly attenuated, well rounded, very narrowly umbilicated, marked by fine lines of growth only. Aperture oval; posterior angle acute; outer lip thin; inner lip strongly curved and reflected, provided with a strong oblique fold at its insertion; parietal wall covered by a thin callus.

The type, Cat. No. 250366, U.S.N.M., comes from Port Alfred (Coll. No. 1239). It has six postnuclear whorls, and measures: Length, 2.4 mm.; diameter, 1.2 mm.

Family ATLANTIDAE.

Genus ATLANTA Lesueur.

**ATLANTA PERONII** Lesueur.

One specimen, Cat. No. 250549, U.S.N.M., from Port Alfred (Coll. No. 1422). Cat. No. 250551, U.S.N.M., contains two young specimens from the same locality (Coll. No. 1424).

Family CYMATIIDAE.

Genus BURSA Bolten.

**BURSA (MARSUPINA)**, species?

Cat. No. 186790, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 153) which resembles *Bursa granifer* of Lamarck, a Philippine species. It is very likely the shell that has been reported from South Africa under that name. Unfortunately the specimen before me is not perfect enough to be properly diagnosed. Cat. No. 250439, U.S.N.M., contains another young specimen from Port Alfred (Coll. No. 1312.)

**BURSA (MARSUPINA)**, species?

Cat. No. 187022, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 557) which resembles *Bursa semigranosa* from the Philippines but is not that species. It is also too poor to permit of proper diagnosis.

## Genus EUGYRINA Dall.

## EUGYRINA GEMNIFERA Euthyme.

Plate 9, figs. 1, 4.

Cat. No. 227776, U.S.N.M., two specimens from Port Alfred (Coll. No. 871). I have figured one of these for comparison with the subspecies described below. Cat. No. 187023, U.S.N.M., contains another specimen from the same locality (Coll. No. 558). Cat. No. 186705, U.S.N.M., a young tip from the same locality (Coll. No. 65a). Cat. No. 186787, U.S.N.M., contains one specimen from the same place (Coll. No. 148.)

## EUGYRINA GEMNIFERA LEPTA, new subspecies.

Plate 8, figs. 1, 4.

Shell similar to *E. gemnifera* but narrower and much lighter in weight. The sculpture is decidedly reduced. The tubercles are much more numerous and much less strongly defined than in *E. gemnifera*, there being 12 on the last volution of typical *gemnifera* while *lepta* has 20 and 14 on the whorl preceding to 22 in *lepta*. In fact, the entire sculpture is much finer in *lepta* than in *gemnifera*.

Cat. No. 227777, U.S.N.M., contains the type and another specimen from Port Alfred (Coll. No. 872) and Cat. No. 187024, U.S.N.M., contains one specimen from the same locality (Coll. No. 559). The type has lost the tip, the seven whorls remaining measure: Length, 84.2 mm.; greater diameter, 46.3 mm.

## Genus ARGOBUCCINUM Mörch.

## ARGOBUCCINUM ARGUS Gmelin.

Cat. No. 91, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 16920, U.S.N.M., two from Cape of Good Hope. Cat. No. 125376, U.S.N.M., two from Cape Town, collected by the U. S. Eclipse Expedition in 1890. Cat. No. 227775, U.S.N.M., one specimen from Port Alfred (Coll. No. 870).

## ARGOBUCCINUM, species?

Cat. No. 97, U.S.N.M., a fragment of a large specimen embracing the aperture and part of the pillar, collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay.

## Genus CYMATIUM Bolten.

## CYMATIUM DOLIARIUM Lamarck.

Cat. No. 106, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 88628, U.S.N.M., two from Cape of Good Hope. Cat. No. 186788, U.S.N.M., two from Port Alfred (Coll. No. 149).

## CYMATIUM OLEARIUM Linnaeus.

Cat. No. 227774, U.S.N.M., two specimens from Port Alfred (Coll. No. 869). Cat. No. 250435, U.S.N.M., one specimen from the same place (Coll. No. 1308).

## CYMATIUM AFRICANUM A. Adams.

Cat. No. 186786, U.S.N.M., one specimen from Port Alfred (Coll. No. 147).

## CYMATIUM KLENEI Sowerby.

Cat. No. 186789, U.S.N.M., two specimens from Port Alfred (Coll. No. 150).

## Genus NYCTILOCHUS Gisl.

## NYCTILOCHUS ALFREDENSIS, new species.

Plate 4, fig. 4.

Shell similar to certain forms of *T. australis* Lamarek, but with almost complete absence of nodules. Color orange, with obscure squares and rectangular spots of brown. Nuclear whorls decollated. Postnuclear whorls well rounded, appressed at the summit, moderately constricted at the sutures, marked axially by rather irregularly spaced, scarcely elevated varices, and numerous, very slender, closely spaced, raised threads. The spiral markings consist of subequal and rather closely, subequally spaced lirations. The same sculpture holds good on the base and rostrum. On the latter, the spiral threads assume a duplex development, some being coarser than others, the coarser being separated by two or three of the finer. The last turn has a single nodule a little behind the variced aperture, situated almost midway between the summit and the periphery. Aperture pale rose within, channeled anteriorly; posterior angle acute, outer lip reinforced by a weak varix; columella sinuous, glazed with a callus with several slight lirations on the anterior end; parietal wall provided with a slender lamella a little anterior to the posterior angle of the aperture.

The type, Cat. No. 186785, U.S.N.M., comes from Port Alfred (Coll. No. 146). It has lost the nucleus; the five turns which remain measure: Length, 60.5 mm.; diameter, 31.2 mm.

An additional specimen, Cat. No. 250436, U.S.N.M., from the same source (Coll. No. 1309), has also lost the nucleus and probably some of the early turns; the remaining seven measure: Length, 98 mm.; diameter, 51 mm. In this the outer lip is reinforced within at the edge. The reinforced portion consists of alternating bands of light and dark, the lighter ones being about one-third as wide as the broad dark



bands posteriorly, and half as wide anteriorly. They are of the same color as the interior of the aperture, while the dark areas are yellowish brown. The outer edge of the columellar callus is also smokily tinted.

**NYCTILOCHUS, species ?**

Cat. No. 250437, U.S.N.M., contains a ponderous species from Port Alfred, which is too badly worn to be properly identified. (Coll. No. 1310.)

**Genus CRYOTRITONIUM Martens.**

**CRYOTRITONIUM MURRAYI Smith.**

Cat. No. 206005, U.S.N.M., one specimen from Agulhas Bank, South Africa.

**Genus ASPELLA Mörch.**

**ASPELLA ANCEPS Lamarck?**

Cat. No. 186791, U.S.N.M., two specimens from Port Alfred (Coll. No. 154). These are not like our *A. anceps* Lamarck from the west coast of America, the type locality, but the specimens before us are too poor to be properly diagnosed, so I let them stand under the name under which they have appeared in the past from South Africa.

**NEPIONIC SHELLS.**

Cat. No. 249727, U.S.N.M., contains three nepionic shells belonging to the Cymatiidae, from Port Alfred (Coll. No. 999).

**Family CASSIDIDAE.**

**Genus CASSIS Lamarck.**

**CASSIS ACHATINA Lamarck.**

Cat. No. 43078, U.S.N.M., one from Cape of Good Hope. Cat. No. 77298, U.S.N.M., two from the same locality. Cat. No. 97976, U.S.N.M., eight from Kleinemond, Albany. Cat. No. 186792, U.S.N.M., one from Port Alfred (Coll. No. 155).

**CASSIS ZEALANICA Lamarck.**

Cat. No. 18400*a*, U.S.N.M., one from Cape of Good Hope. Cat. No. 187025, U.S.N.M., one from Port Alfred (Coll. No. 561). Cat. No. 227778, U.S.N.M., one specimen from the same place (Coll. No. 873.)

**CASSIS PYRUM Lamarck.**

Cat. No. 95, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 18400, U.S.N.M., one from Cape of Good Hope. Cat. No. 18802, U.S.N.M., one from Port Elizabeth.

## Family DOLIIDAE.

## Genus DOLIUM Lamarck.

## DOLIUM DUNKERI Hanley.

Cat. No. 18798, U.S.N.M., one from Port Elizabeth. Cat. No. 186793, U.S.N.M., one from Port Alfred (Coll. No. 156).

## Family AMPHIPERASIDAE.

## Genus AMPHIPERAS Meuschen.

## AMPHIPERAS BECKERI Smith.

Cat. No. 186977, U.S.N.M., one specimen from Port Alfred (Coll. No. 509). Cat. No. 249662, U.S.N.M., contains another specimen from the same locality (Coll. No. 934).

## AMPHIPERAS SMITHI, new species.

Plate 10, figs. 1, 3.

Shell irregularly elongate-ovate, purplish pink, with a moderately wide median band, and the tips and lip yellowish white. The surface of the shell is smooth, excepting fine, equally spaced and equally distributed, spiral threads which are best developed near the anterior and posterior fourth, becoming weaker as they approach the center. In addition to this spiral sculpture, there are exceedingly fine lines of growth which are best seen in the spaces between the spiral threads. Aperture elongate-lunate, outer lip thick, forming a strong rounded callus at the edge; inner lip represented by a thin callus placed upon the body whorl, which becomes decidedly thickened on the anterior and posterior horns; a short distance posterior to the anterior end there is an oblique fold on the inner lip.

The type, Cat. No. 227715, U.S.N.M., comes from Port Alfred (Coll. No. 810). It measures: Length, 19.5 mm.; diameter, 8.1 mm.

## Family CYPRAEIDAE.

## Genus CYPRAEA Linnaeus.

## CYPRAEA CAPENSIS Lamarck.

Cat. No. 18174, U.S.N.M., one from Natal. Cat. No. 75565, U.S.N.M., three from Cape of Good Hope. Cat. No. 77266, U.S.N.M., two collected by E. R. Mayo at the same place. Cat. No. 77712, U.S.N.M., two from Cape of Good Hope. Cat. No. 97980, U.S.N.M., six from Kleinemonde, Albany. Cat. No. 186796, U.S.N.M., one from Port Alfred (Coll. No. 161). Cat. No. 250318, U.S.N.M., one specimen from the same source (Coll. No. 1191). Cat. No. 250322, U.S.N.M., one specimen from the same locality (Coll. No. 1195). Cat. No. 272122, U.S.N.M., four from Port Elizabeth.

*CYPRAEA SIMILIS* Gray.

Cat. No. 220121, U.S.N.M., one specimen from Cape of Good Hope.  
Cat. No. 249661, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 933).

*CYPRAEA VITELLUS* Linnaeus.

Cat. No. 250317, U.S.N.M., contains a badly worn specimen from Port Alfred (Coll. No. 1190).

*CYPRAEA*, species ?

Cat. No. 250320, U.S.N.M., contains a young specimen from Port Alfred which I am unable to identify positively (Coll. No. 1193).

*CYPRAEA EDENTULA* Gray.

Cat. No. 43162, U.S.N.M., two from Cape of Good Hope. Cat. No. 75564, U.S.N.M., four from the same locality. Cat. No. 77709, U.S.N.M., two from the same place. Cat. No. 97977, U.S.N.M., five from Kleinemonde, Albany. Cat. No. 97978, U.S.N.M., seven from the mouth of Fish River. Cat. No. 97979, U.S.N.M., two from Kleinemonde, Albany. Cat. No. 186795, U.S.N.M., two from Port Alfred (Coll. No. 159.) Cat. No. 250319, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1192). Cat. No. 272123, U.S.N.M., one specimen from South Africa. Cat. No. 272125, U.S.N.M., four from Port Elizabeth.

*CYPRAEA CITRINA* Gray.

Cat. No. 186794, U.S.N.M., one specimen from Port Alfred (Coll. No. 158). Cat. No. 186978, U.S.N.M., one from the same source (Coll. No. 510).

*CYPRAEA ALGOENSIS* Gray.

Cat. No. 227713, U.S.N.M., one specimen from Port Alfred (Coll. No. 808). Cat. No. 227714, U.S.N.M., one specimen from the same locality (Coll. No. 809).

*CYPRAEA OVULA* Lamarck.

Cat. No. 18455, U.S.N.M., one from R. D. Darbishire, collected in Natal. Cat. No. 43157, U.S.N.M., three from Cape of Good Hope. Cat. No. 77717, U.S.N.M., two from the same place. Cat. No. 186976, U.S.N.M., three from Port Alfred (Coll. No. 508).

*CYPRAEA FIMBRIATA* Gmelin.

Cat. No. 249660, U.S.N.M., contains a specimen from Port Alfred Coll. No. 932.

## Family TRIVIIDAE.

## Genus TRIVIA Gray.

## TRIVIA ONISCUS Lamarck.

Cat. No. 75566, U.S.N.M., two specimens from Cape of Good Hope. Cat. No. 97981, U.S.N.M., ten specimens from Albany coast, South Africa. Cat. No. 128415, U.S.N.M., one collected by Warren, at Cape of Good Hope. Cat. No. 186797, U.S.N.M., one specimen from Port Alfred (Coll. No. 162). Cat. No. 253739, U.S.N.M., one from Algoa Bay. Cat. No. 272124, U.S.N.M., three specimens from Port Elizabeth.

## TRIVIA FORMOSA Gaskoin.

Cat. No. 186799, U.S.N.M., two specimens from Port Alfred (Coll. No. 164).

## TRIVIA VESICULARIS Gaskoin?

. Cat. No. 186798, U.S.N.M., one specimen from Port Alfred (Coll. No. 163).

## TRIVIA PELLUCIDULA Gaskoin.

Cat. No. 186800, U.S.N.M., two specimens from Port Alfred (Coll. No. 165).

## Family TRIPHORIDAE.

## Genus TRIPHORIS Deshayes.

## TRIPHORIS ATEA, new species.

Plate 11, fig. 6.

Shell rather large, wax yellow. Nuclear whorls decollated, except the last turn which is smooth. Postnuclear whorls almost flattened, slightly shouldered at the summit, marked by strong, rounded, slightly protractive axial ribs, which are interrupted by a deep spiral sulcus at the anterior extremity of the posterior two-thirds of the ribs, which lends them the appearance of so many exclamation points. Of these ribs, 16 occur upon the first to third, 18 upon the fourth, 20 upon the fifth, 22 upon the sixth and seventh, and 26 upon the remaining whorls. The ribs are abruptly truncated at the anterior termination of the sulcus and slopingly so at the posterior. In addition to the above sculpture, there appears in the suture of each turn, an almost smooth, strong spiral cord, which on the last turn, forms the peripheral cord, to which the axial ribs extend feebly. Base very short, slightly concave, marked by three equal and equally spaced spiral cords which occupy the space between the peripheral cord and the insertion of the columella. The spaces which separate these cords are a little less wide than the cords. Aperture decidedly channeled anteriorly and less strongly so posteriorly; outer lip ren-

dered sinuous by the external sculpture, translucent, showing the external sculpture within; columella covered by a thick callus which is reflected over the parietal wall and renders the peritreme complete.

The type, Cat. No. 250350, U.S.N.M., comes from Port Alfred (Coll. No. 1223). It has  $11\frac{1}{2}$  whorls and measures: Length, 12 mm.; diameter, 3.5 mm.

*TRIPHORIS CONVEXA* Smith.

Cat. No. 186805, U.S.N.M., one specimen from Port Alfred (Coll. No. 171). Cat. No. 227724, U.S.N.M., four specimens from the same source (Coll. No. 819). Cat. No. 227725, U. S.N.M., four specimens also from Port Alfred (Coll. No. 820).

*TRIPHORIS*, species ?

Cat. No. 250347, U.S.N.M., contains a young individual of a pure white species from Port Alfred, which differs from any of the known species, but is too young to serve for a diagnosis. (Coll. No. 1220).

*TRIPHORIS HELENA*, new species.

Plate 11, figs. 2, 5.

Shell elongate-conic, bluish white. Nuclear whorls almost four; the first third of a turn smooth, the succeeding marked by two strong, lamellar spiral cords, the first of which is at the summit and the second about as far above the suture as it is separated from the first. Post-nuclear whorls strongly rounded, ornamented with three strong, sub-lamellar spiral cords which are feebly tuberculated. The first of these cords is at the summit, the third about as far above the suture as it is separated from the median, while the median occupies the space midway between the other two. In addition to these spiral cords, the whorls are marked by about 20 obsolete, broad riblets which render the spiral cords feebly tuberculated. In addition to the above sculpture, the entire surface is marked with fine lines of growth and microscopic, spiral striations. Suture channeled. Periphery of the last whorl marked by a broad spiral sulcus which is equal to the sulcus separating the supraperipheral cord from the median cord. This sulcus is bound anteriorly by a cord equal to those on the spire, a second feeble spiral cord is situated at the insertion of the columella, the space between these two being a broad, concave area. Aperture decidedly channeled anteriorly, feebly so posteriorly; outer lip thin, showing the external sculpture within, rendered sinuous at the edge by the external sculpture; columella stout, covered with a strong callus which extends over the parietal wall and renders the peritreme complete.

Cat. No. 250348, U.S.N.M., contains the nuclear tip of a young specimen, and an adult specimen, minus the nucleus. These may be con-



sidered cotypes. They come from Port Alfred (Coll. No. 1221). The young specimen has seven postnuclear whorls, and measures: Length, 5.1 mm.; diameter, 2 mm. The adult specimen has lost the nuclear turns; the 12 postnuclear turns measure: Length, 8.6 mm.; diameter, 2.4 mm. Cat. No. 249676, U.S.N.M., contains another specimen from the same place (Coll. No. 948). Cat. No. 250349, U.S.N.M., contains the nuclear tip of another specimen from the same locality (Coll. No. 1222).

**TRIPHORIS FUSCOMACULATA** Smith.

Four lots of these specimens are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 186806, three specimens (Coll. No. 172). Cat. No. 227718, three specimens (Coll. No. 813). Cat. No. 227723, two specimens (Coll. No. 818). Cat. No. 249684, two specimens (Coll. No. 956).

**TRIPHORIS SMITHI**, new species.

Plate 10, figs. 7, 8.

Shell very elongate-conic; yellowish white; irregularly flecked with blotches and streaks of pale brown. Nuclear whorls partly decolated. The first of the remaining turns is a little larger than the succeeding and is smooth. The three following volutions increase very gently in size and are marked by two strong spiral cords, of which the first is at the summit and the second some little distance above the periphery, the space between the two, which is deeply concaved, being about twice as wide as either of the keels. Postnuclear whorls moderately rounded, ornamented with three strong spiral cords of which the median is a little stronger than the other two. The first of these is at the summit and the third a little above the suture. The sulci separating the median from the other two cords are equal to the median cord in width. In addition to the spiral sculpture, the whorls are marked by axial ribs which are about half as strong as the spiral cords. Of these ribs, 16 occur upon the first, 18 upon the second, 20 upon the third and fourth, 21 upon the fifth, 22 upon the sixth, and 24 upon the remaining turns. The junction of the axial ribs and the spiral cords form feeble tubercles. Sutures feebly impressed, scarcely differentiated from the sulci between the spiral cords. Periphery of the last whorl rendered angular by a strong spiral cord; the sulcus between which and the cords adjacent to it posteriorly, is crossed by the continuations of the axial ribs. Base very short and slightly rounded, marked by two spiral cords which are less strong than the peripheral one, separated by deep spiral grooves. Aperture moderately large, channeled anteriorly and posteriorly; outer lip forming a decided angle at the junction with the basal lip, rendered decidedly wavy at the edge by the external sculp-

ture; inner lip appressed to and reflected over the short base; parietal wall covered by a thin callus.

Cat. No. 227719, U.S.N.M. (Coll. No. 814), contains three specimens from Port Alfred. Two of these are cotypes; one, a young individual of 11 postnuclear whorls, has served for our description of the nucleus and the early postnuclear whorls. This measures: Length, 7 mm.; diameter, 2.2 mm. The other, an adult individual having lost the nucleus and probably the first four postnuclear turns, retaining the last 13 whorls, measures: Length, 13 mm.; diameter, 3 mm. Cat. No. 227720, U.S.N.M. (Coll. No. 815) two specimens from the same locality.

*TRIPHORIS ELSA*, new species.

Plate 11, fig. 1.

Shell elongate-conic, bluish white. Nuclear whorls decollated, the last turn only remaining, which is smooth. Postnuclear whorls moderately rounded, marked by three spiral cords, of which the first is a little anterior to the summit, while the third is as far above the suture as it is separated from the median. The median occupies a position half way between the other two. In addition to these spiral cords, the whorls are marked by slightly protractive, moderately strong, rounded axial ribs, of which 18 occur upon all but the last two whorls, which have 20. The junction of the axial ribs and the spiral cords form rounded nodules, which have the long axis parallel to the spiral sculpture. These nodules are well rounded on the posterior cord, while on the median cord they are truncated anteriorly and posteriorly, a little more abruptly anteriorly than posteriorly. On the third cord they are truncated posteriorly and sloped gently anteriorly. The spaces inclosed between the cords form shallow, rectangular pits. The summit of the whorls falls a little anterior to the peripheral cord and allows this to be apparent in all the sutures. Periphery of the last whorl marked by a strong cord, which is separated from the first supra-peripheral cord by a sulcus as wide as that which separates those from the median cord. This sulcus, like the other, is crossed by continuations of the axial ribs, which terminate at the posterior edge of the peripheral cord. Base concave, marked by a slender, spiral cord immediately adjacent to the peripheral cord. In addition to the above sculpture the entire surface of the shell is marked by fine lines of growth and microscopic spiral striations. Aperture channeled anteriorly; outer lip thin, showing the external sculpture within and rendered sinuous by the external sculpture at the edge; columella stout, curved, covered by a thin callus, which extends over the parietal wall.

Cat. No. 249678, U.S.N.M., contains two adolescent shells of this species, one of which is the type. They are from Port Alfred (Coll.

No. 950). The type has lost the early nuclear whorls, the last one only remaining. In addition to that it has a little more than 10 post-nuclear whorls, and measures: Length, 9.5 mm.; diameter, 3.1 mm.

**TRIPHORIS SHEPSTONENSIS** Smith.

Cat. No. 186804, U.S.N.M., four specimens from Port Alfred (Coll. No. 170). Cat. No. 227716, U.S.N.M., six specimens from the same locality (Coll. No. 811). Cat. No. 250351, U.S.N.M., another specimen from Port Alfred (Coll. No. 1224).

**TRIPHORIS MILDA**, new species.

Plate 11, fig. 3.

Shell elongate-conic, light brown. Nuclear whorls decollated. Post-nuclear whorls tabulatedly shouldered at the summit, flattened, marked by three strong, tuberculated spiral cords, of which the first is at the summit, the second halfway between this and the last, the latter being about as far above the suture as it is distant from the median. In addition to the spiral cords the whorls are marked by rather strong, broad, almost vertical axial ribs, of which 14 occur upon the first and second, 16 upon the third, 20 upon the fourth and fifth, 22 upon the sixth to ninth, 26 upon the tenth, 24 upon the eleventh, 26 upon the twelfth, and 28 upon the thirteenth and the penultimate turn. The junctions of the axial ribs and the spiral cords form strong tubercles, of which those on the first cord are truncated anteriorly, forming a decidedly channeled, crenulated suture. These tubercles are of oval outline, having their long axis parallel with the ribs. The tubercles of the median cord are almost rounded, truncated posteriorly, and slope gently anteriorly. Those of the supra-sutural cord are smaller than the rest and a little more strongly truncated posteriorly, sloping abruptly anteriorly. The spaces inclosed between the axial ribs and peripheral cords are well rounded, strongly impressed pits. Sutures strongly channeled, showing a portion of the first basal cord. Periphery of the last whorl marked by a sulcus, which is crossed by the continuations of the axial ribs and is about as wide as the sulcus on the spire. Base well rounded, marked by three strong spiral cords, which divide the posterior half of the base, that is, the space between the peripheral sulcus and the insertion of the columella, into equal portions. These three cords become diminished in strength in regular sequence from the one adjacent to the periphery to the one on the columella. The entire surface of the shell is marked by exceedingly fine lines of growth and microscopic spiral striations. Aperture strongly channeled anteriorly, less so posteriorly; junction of the basal and outer lip forming a decided angle that projects as a claw-like element; outer lip thin, showing the external sculpture within; columella short, stout, curved, marked by a thick callus which extends over the parietal wall and renders the peritreme complete.

The type and another specimen, Cat. No. 249685, U.S.N.M., come from Port Alfred (Coll. No. 957). The type has  $13\frac{1}{2}$  postnuclear whorls, and measures: Length, 9.6 mm.; diameter, 3 mm.

**TRIPHORIS OREADA, new species.**

Plate 11, fig. 4.

Shell elongate-conic, flesh colored. Nuclear whorls decollated, excepting a very small portion of the last turn, which is smooth. Post-nuclear turns marked by three lamellar, spiral keels, which are very feebly tuberculated. Of these keels the first is at the summit and the last about as far above the suture as it is from the median, which is half way between the other two. These spiral lamellae are truncated abruptly anteriorly and posteriorly and are somewhat flattened at the summit and are about as wide as the spaces that separate them. In addition to the spiral lamellae, the whorls are marked by numerous, feeble, slightly retractive axial ribs, which are best developed in the grooves between the spiral lamellae, passing up on the sides of these and rendering them weakly nodulous on the two sides. Of these ribs, about 20 occur upon the first to third, 22 upon the fourth to sixth, 24 upon the seventh, 26 upon the eighth, 28 upon the ninth to eleventh and 30 upon the penultimate turn. The spaces inclosed between the spiral lamellae and the axial riblets are squarish, weakly impressed pits. Periphery of the last whorl marked by a spiral cord a little weaker than the lamellae on the spire and separated from the supra-peripheral cord by a sulcus about as wide as those on the spire, which is crossed by the feeble continuations of the axial riblets. Base provided with another spiral cord which is half way between the peripheral cord and the insertion of the columella. Aperture very strongly twisted and channeled anteriorly, slightly less so posteriorly; outer lip patulous, thin, showing the external sculpture within; columella very much twisted and curved, covered with a thick callus which also extends over the parietal wall and renders the peritreme complete.

Cat. No. 249682, U.S.N.M., contains the type and another specimen, both from Port Alfred (Coll. No. 954). The type has 13 whorls, and measures: Length, 8.8 mm.; diameter, 2.1 mm.

**TRIPHORIS, species?**

Cat. No. 187045, U.S.N.M., contains a young, broadly conic, brown species, from Port Alfred, which differs from any of the other material we have seen from South Africa, but is too young to be positively determined (Cat. No. 583).

**TRIPHORIS AFRICANA, new species.**

Plate 5, fig. 11.

Shell elongate-conic, light chestnut brown, except the nucleus and the early post-nuclear whorls which are wax yellow, with the



posterior row of tubercles on each turn flesh colored. Nuclear whorls  $3\frac{1}{2}$ , the first half smooth, the remainder marked by two slender spiral threads, which are placed anterior and posterior to the middle of the whorls, leaving a narrow space between them about one-half the width of that between the summit and the first spiral thread below it. In addition to the spiral threads, these whorls are marked with slender axial riblets, which curve strongly, retractively from the summit to the first spiral thread, crossing the space between the two spiral threads in a straight, retractive line, then continuing over the anterior portion of the wall in a slightly curved, protractive manner. These riblets are very feeble on all but the last nuclear whorl, on which they are much stronger. On this there are 34. Postnuclear whorls flattened. The first four are marked with two strong spiral cords, of which one is immediately below the shouldered summit, while the other is a little above the suture. Beginning with the fifth, a slender spiral cord makes its appearance half way between the other two. This increases rapidly in size and on the seventh is equal to the others. In addition to this spiral structure, the whorls are marked with strong axial ribs, of which 16 occur upon the first, 18 upon the second to sixth, 20 upon the seventh to ninth, and 22 upon the penultimate turn. On the first four whorls, the junction of the axial ribs and spiral cords form strong, rounded tubercles on the cord at the summit, while at the anterior cord the tubercles are truncated posteriorly and slope gently anteriorly, the whole having a somewhat dumbbell shape. On the remaining cords the same structure applies to the shape of the tubercles of the first and third cords, while on the median cord of the fourth and fifth whorls the tubercles are elongate-oval, having their own axes parallel with the spiral sculpture. On the remaining cords, the tubercles and the median cords resemble those of the supraperipheral cord. The spaces inclosed between the spiral cords and the axial ribs are large, well impressed, squarish pits on the first four turns, while on the remaining turns they appear as rounded pits. Sutures strongly impressed. Periphery of the last whorl marked by a smooth spiral cord, which is separated from the supraperipheral cord by a groove about as wide as that which separates the supraperipheral cord from its posterior neighbor, and crossed by the continuations of the axial riblets which terminate at the posterior border of the peripheral keel. Base moderately long, well rounded, marked by three, strong, broad, low, rounded, equally spaced, spiral cords, which are separated by narrow, rounded, impressed channels. The last one of these is partly upon the columella. Aperture irregular, decidedly channeled anteriorly; posterior angle obtuse; outer lip rendered sinuous and irregular by the external sculpture; columella covered with a very thick callus which is reflected over the base and extends over the parietal wall.



The type and another specimen, Cat. No. 186804a, U.S.N.M., come from Port Alfred (Coll. No. 170). The type has  $13\frac{1}{2}$  whorls, and measures: Length, 5 mm.; diameter, 1.7 mm. Cat. No. 227717, U.S.N.M., contains six specimens from the same locality (Coll. No. 812). Cat. No. 249679, U.S.N.M., one specimen from same locality (Coll. No. 951).

**TRIPHORIS CAPENSIS**, new species.

Plate 5, fig. 4.

Shell very elongate-ovate, white. Nuclear whorls decollated. Postnuclear whorls flattened, the first two marked by two strong spiral cords, of which the first is at the summit, and the second a little nearer the suture than to the one at the summit. Beginning with the second whorl, a slender spiral cord appears between the other two, which increases rapidly in size obtaining almost the strength of the other two on the last volution. In addition to these spiral cords, the whorls are marked with well rounded, almost vertical, straight, axial ribs, of which 14 occur upon the first, 18 upon the second to fifth, 20 upon the sixth, and 22 upon the penultimate turn. The junctions of the axial ribs and the spiral cord form low tubercules, while the spaces inclosed between them appear as deep squarish pits. Sutures strongly constricted. Periphery of the last whorl angulated, marked by a strong spiral cord which is feebly tuberculated. Base moderately long, the posterior half provided with two equal and equally spaced, spiral cords, while the anterior portion appears as a strongly tumid area. Aperture decidedly irregular, strongly channeled anteriorly; posterior angle decidedly channeled; outer lip thin, decidedly curved and very strongly produced anteriorly; the portion facing the columella is pinched in and so curved as to almost touch the columella, leaving only a very narrow slit between it and the columella; parietal wall covered with a very thick callus.

The type and another specimen, Cat. No. 187044, U.S.N.M., were collected at Port Alfred (Coll. No. 582). The type has eight post-nuclear whorls, and measures: Length, 5.1 mm.; diameter, 2 mm.

**TRIPHORIS MADRIA**, new species.

Plate 12, fig. 5.

Shell elongate-conic, white. Nuclear whorls large, forming a rather bulbous apex on the shell. The first turn smooth, the following encircled by three smooth, spiral bands. The second turn is larger in diameter than the two succeeding. Post-nuclear whorls moderately rounded, ornamented with three spiral cords, of which the one at the summit is a little weaker on the early whorls than on the rest. The third cord is about as far from the suture as it is from the median, while the median cord occupies a position halfway between the other two. The sulci separating the spiral cords are a little wider than the cords. In addition to the spiral cords the whorls are marked by

poorly separated, low, rounded, slightly protractive, axial ribs, of which 16 occur upon the first and second, 18 upon the third, 20 upon the fourth to sixth, and 24 upon the penultimate whorl. The junction of these ribs and the spiral cords form poorly defined tubercles. Those on the first cord being very illdefined and oval, while those on the median cord are oval and truncated anteriorly and posteriorly, having the long axis parallel with the spiral sculpture, appearing like a series of strung beads. Those of the anterior cord are truncated posteriorly and are well rounded anteriorly. Sutures channeled, a little more strongly so than the space between the spiral cords of the spire. Periphery of the last whorl marked by a spiral sulcus about as wide as the sulci on the spire and like those crossed by the continuation of the axial ribs which terminate at the posterior edge of the first basal cord. Base moderately rounded, marked by four spiral cords which grow successively weaker from the first, immediately below the periphery, to the last, which is on the base of the columella. In addition to this sculpture, the entire surface is marked by exceedingly fine lines of growth and microscopic, spiral striations. Aperture rather large, decidedly channeled anteriorly, less so posteriorly, patulous at the junction of the outer and basal lip; outer lip thin, showing the external sculpture within and rendered sinuous at the edge by the external sculpture; columella covered by a thick callus, which is reflected over the parietal wall and renders the peritreme complete.

The type, and another specimen, Cat. No. 249677, U.S.N.M., come from Port Alfred (Coll. No. 949a). The type is a perfect specimen having the four nuclear turns and eight postnuclear whorls, and measures: Length, 6.5 mm.; diameter, 2 mm.

TRIPHORIS, species ?

Cat. No. 249677, U.S.N.M., contains a pure white specimen, recalling strongly in sculpture *Triphoris milda*, but it is of a much smaller species with four basal keels; it is not quite adult and we refrain from describing it for the present till better material may be had. It comes from Port Alfred (Coll. No. 949a).

TRIPHORIS SABITA, new species ?

Plate 11, fig. 7.

Shell small, elongate-conic, ovate, light brown, excepting the tips of the tubercles which are flesh colored. The extreme tip of the shell is wax-yellow and the outer lip is white. Nuclear whorls a little more than two, the first smooth, the second finely transversely ribbed, the riblets having slender nodules, the first of which is near the summit, the other immediately above the suture. Post-nuclear whorls moderately rounded, the first two ornamented by two nodulose, spiral cords, the first of which is at the summit and the

second at some little distance posterior to the suture. Beginning with the third whorl, a slender, spiral thread makes its appearance half way between the two strong cords; this increases steadily in size and on the last turn it bears nodules almost as strong as those of the other two cords. In addition to the spiral sculpture, the whorls are marked by slender, vertical, axial ribs, the junction of which with the spiral cords render them tuberculated. Of these ribs, 20 occur upon all but the last, which turn has 22. The spaces inclosed between the axial ribs and the spiral cords form well impressed pits. The tubercles of the cord at the summit are strongly rounded; those of the median cord are merely thickened lines at the junction on the first two whorls where they occur, while on the last, they are oval, their long axis coinciding with the spiral cord. Those of the third cord are truncated posteriorly, sloping gently anteriorly. Sutures a little broader than the sulci between the spiral cords. Periphery of the last whorl marked by a spiral sulcus which is about as broad as the one separating the supraparipheral from the median cord on the last whorl. Base well rounded, marked by two spiral cords, the first of which is immediately below the periphery, the second half way between this and the insertion of the columella. In addition to the above mentioned sculpture, the entire surface of the shell is marked by fine lines of growth and microscopic, spiral striations. Aperture strongly channeled anteriorly, feebly so posteriorly, decidedly patulous at the junction of the outer and basal lip; outer lip thin, showing the external sculpture within and rendered sinuous at the edge by this sculpture; columella short, very stout, covered on its inner edge by a strong callus which is reflected over the parietal wall and renders the peritreme complete.

Cat. No. 249680, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 952). One of these, the type, has six postnuclear whorls, and measures: Length, 3 mm.; diameter, 1.4 mm.

TRIPHORIS, species?

Cat. No. 250353, U.S.N.M., contains the tip of a dusky cylindric species, which we are unable to identify, from Port Alfred (Coll. No. 1226).

TRIPHORIS FUSCESCENS Smith.

The United States National Museum contains four lots of this species from Port Alfred, as follows: Cat. No. 186808, two specimens (Coll. No. 174). Cat. No. 220061, one specimen (Coll. No. 173a). Cat. No. 227721, two specimens (Coll. No. 816). Cat. No. 249674, two specimens (Coll. No. 946).

TRIPHORIS CEREAE Smith.

Cat. No. 249681, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 953).

**TRIPHORIS NINA**, new species.

Plate 11, fig. 8.

Shell elongate-conic, light chestnut brown, excepting the tubercles of the cord at the summit on each turn, which have a purplish tinge. (Nuclear whorls decollated.) Postnuclear whorls very slightly rounded, ornamented on the first four turns by two spiral tuberculated cords, one of which is at the summit and the tubercles of the other slope to the suture. Beginning with the fifth turn, a slender spiral thread makes its appearance half way between the two, which increases rapidly in size and assumes tubercles on the following turns. On the seventh turn, another spiral thread makes its appearance half way between the median and basal cord. This likewise increases in size, and on the last three turns the tubercles of these two cords are as strong as those of the first and fourth. In addition to the spiral cords the whorls are marked by low, rather broad, feeble, axial ribs, of which 16 occur upon the first to third, 18 upon the fourth and fifth, 20 upon the sixth to eighth, 22 upon the ninth, and 24 upon the last turn. These ribs are moderately protractive on the first five turns and become very strongly so on the last. The junction of the axial ribs and the spiral cords form moderately strong tubercles, which are oval on the first two cords, having their long axis parallel with that of the spiral sculpture. On the last two cords they are truncated anteriorly, sloping gently posteriorly. The spaces inclosed between the axial ribs and spiral cords are shallow, oval pits. Sutures channeled. Periphery of the last whorl marked by a sulcus as strong as those of the spire, and like those, crossed by the continuation of the axial ribs. Base well rounded, marked by three subequal spiral cords, which divide the space below the periphery and the insertion of the columella, into equal areas. Aperture decidedly channeled anteriorly; outer lip (fractured); columella short, stout, twisted, covered with a thick callus which extends over the parietal wall.

The type, Cat. No. 250352, U.S.N.M., comes from Port Alfred (Coll. No. 1225), it has lost the nucleus and probably the first post-nuclear turn; the  $10\frac{1}{2}$  remaining measure: Length, 5 mm.; diameter, 1.5 mm.

**TRIPHORIS IMA**, new species.

Plate 10, fig. 6.

Shell large, yellowish white, spotted and blotched with very light chestnut brown. (Nuclear whorls decollated in all our specimens.) Postnuclear whorls flattened, marked with four strong, flattened, spiral keels which are about as wide as the deep grooves which separate them. The first of these keels is at the summit and is a little wider than the other three. The space separating this from its



neighbor is also a little wider than the other spaces. The spiral grooves are crossed by numerous, very slender, somewhat irregularly spaced, axial threads. Sutures strongly constricted, usually showing the peripheral cord. Periphery of the last whorl marked by a strong cord which is separated from the suprapерipheral cord by a groove as wide as that which separates this from its posterior neighbor. Base short, slightly rounded, marked by two low, broad, spiral cords which divide the space between the insertion of the columella and the peripheral cord equally, the spaces separating them being about equal to the cords in width and crossed by numerous, very slender, raised, axial threads. Aperture (fractured in all our specimens) strongly channeled anteriorly; outer lip rendered sinuous by the external sculpture; columella almost straight, strongly reflected over the reinforcing base, a callus extending over the parietal wall.

The type consists of the seven last whorls, which measure: Length, 9.5 mm.; diameter, 3 mm. It and another specimen, Cat. No. 186807 U.S.N.M., come from Port Alfred (Col. No. 173). The second specimen shows an intercalated spiral cord between the second and third keel and another between the third and fourth, almost equaling the keels in strength on the last volution.

Three additional lots, all from Port Alfred, are in the collection of the United States National Museum. Cat. No. 227722, two specimens (Coll. No. 817). Cat. No. 249683, two specimens (Coll. No. 955). Cat. No. 249675, two specimens (Coll. No. 947).

### Family CERITHIOPSIDAE.

Genus CERITHIOPSIS Forbes and Hanley.

CERITHIOPSIS (CERITHIOPSIS) ALFREDENSIS, new species.

Plate 5, fig. 9.

Shell elongate-conic, light chestnut brown, with the early whorls wax-yellow. (Nuclear whorls decollated, the last one only remaining, which is smooth.) Postnuclear whorls almost flattened, marked with three strong spiral cords of which the first is at the summit, while the third is about as far above the suture as it is separated from the median. The latter is about halfway between the first and third. The spaces between the spiral cords are about as wide as the cords. In addition to the spiral sculpture, the whorls are marked by axial ribs which are almost as strong as the spiral cords. Of these ribs, 18 occur upon the first to fifth, 20 upon the sixth, 22 upon the seventh, 24 upon the eighth and the penultimate turn. The junction of the axial ribs and the spiral cords form prominent tubercles which are truncated posteriorly and slope gently anteriorly. The spaces inclosed between the axial ribs and spiral cords are well rounded,



strongly impressed pits. Sutures strongly impressed. Periphery of the last whorl marked by a strong spiral cord, which is separated from the first suprapерipheral cord by a groove about as wide as those separating the cords on the spire, and, like these, is crossed by the continuations of the axial ribs, which terminate at the posterior border of the peripheral cord. Base moderately long, somewhat irregular, the peripheral cord extending over one-third of the base, while a strong spiral cord encircles the columella at its insertion, the space between this and the peripheral cord being a very deeply impressed, broad, spiral groove. Anterior to the cord marking the insertion of the columella, there is another deeply incised, broad, spiral groove. Aperture irregular, decidedly channeled anteriorly; posterior angle channeled; outer lip irregular, sinuous; columella strong, curved and reflected over and appressed to the base; parietal wall covered by a thick callus which connects the columella with the posterior angle of the aperture.

The type, Cat. No. 186803, U.S.N.M., was collected at Port Alfred (Coll. No. 169). It has 10 postnuclear whorls, and measures: Length, 5 mm.; diameter, 1.5 mm. Three additional lots are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 227727, two specimens (Coll. No. 822). Cat. No. 249692, one specimen (Coll. No. 964). Cat. No. 250355, one specimen (Coll. No. 1228).

*CERITHIOPSIS (CERITHIOPSIS) EXQUISITA* Sowerby.

Cat. No. 227726, U.S.N.M., two specimens from Port Alfred (Coll. No. 821). Another specimen, Cat. No. 250359, U.S.N.M., also comes from Port Alfred (Coll. No. 1232).

*CERITHIOPSIS ERNA*, new species.

Plate 12, fig. 6.

Shell very light chestnut brown. (Nuclear whorls decollated.) Postnuclear whorls very slightly rounded; marked by three tuberculated spiral cords, of which the first is at the summit which it renders shouldered, while the last is a little posterior to the periphery, and the second, midway between the two. In addition to the spiral cords, the whorls are marked by somewhat protractive axial ribs which almost equal the spiral cords in strength. The junctions of the axial ribs and the spiral cords form nodules, while the spaces inclosed between them appear as strongly impressed, squarish pits. The nodules on the cord at the summit are well rounded, those on the middle cord are truncated posteriorly, sloping gently anteriorly, which is also the case on the third cord, but here the nodules are even more abruptly truncated than on the median cord. Of the axial ribs, 18 occur upon the first to fourth, 20 upon the fifth, 22 upon the sixth and seventh, and 24 upon the penultimate turn. In

addition to the above sculpture, the spire is marked by exceedingly fine lines of growth and microscopic spiral striations. Sutures channeled. Periphery of the last whorl marked by a spiral sulcus as broad as the one posterior to the suprasutural cord and, like that, crossed by the axial ribs, which terminate at its posterior margin. Base short, marked by two spiral cords which are of equal strength and confined to the posterior half of the base. The anterior half of the base between the last cord and the insertion of the columella is slightly concave in the adolescent shell. Aperture subquadrate, decidedly channeled anteriorly; posterior angle obtuse; outer lip rendered sinuous by the sculpture; columella stout; parietal wall glazed with a thin callus.

The type and another specimen, Cat. No. 250354, U.S.N.M., come from Port Alfred (Coll. No. 1227). The type, which is an adolescent specimen, has eight and a half postnuclear whorls and measures: Length, 4.5 mm.; diameter, 1.5 mm. Cat. No. 250357, U.S.N.M., contains another specimen from the same locality (Coll. No. 1230).

**CERITHIOPSIS (CERITHIOPSIS) NINA, new species.**

Plate 12, fig. 2.

Shell very small, light chestnut brown. Nuclear whorls smooth, forming the slender, mucronate apex of the shell. Postnuclear whorls slightly shouldered at the summit, moderately rounded, marked by three spiral cords, of which the first is at the summit, the third about as far posterior to the suture as it is separated from its neighbor posteriorly. In addition to the spiral sculpture, the whorls are marked by strong axial ribs which equal the spiral sculpture in strength. The junctions of the axial ribs and the spiral cords form tubercules, while the spaces inclosed between them form well impressed, squarish pits. The tubercles of the cord at the summit are slightly truncated posteriorly, and slope gently anteriorly; those of the succeeding two cords are abruptly truncated posteriorly, sloping gently anteriorly. Of the axial ribs, 18 occur upon all the whorls except the penultimate, on which there are 20. Sutures moderately constricted. Periphery of the last whorl marked by a strong spiral cord, the space between it and the suprasutural cord being crossed by the continuation of the axial ribs which terminate at the posterior edge of the peripheral cord. Base slightly concave, with a spiral cord at the insertion of the columella. Aperture strongly channeled anteriorly, almost circular; outer lip thin; columella covered with a thick callus which is reflected over the parietal wall and connects this with the posterior angle of the aperture, rendering the peristome complete.

The type and another specimen, Cat. No. 250358, U.S.N.M., come from Port Alfred (Coll. No. 1231). The type has almost five postnuclear whorls, and measures: Length, 1.9 mm.; diameter, 0.7 mm.

## CERITHIOPSIS (CERITHIOPSIS) NISABA, new species.

Plate 12, fig. 3.

Shell elongate-conic, light chestnut brown, with the peripheral cord darker. (Nuclear whorls decollated, except a portion of the last turn, which is smooth.) Postnuclear whorls shouldered at the summit, moderately rounded, marked by three spiral cords, of which the first is at the summit, while the third is about as far posterior to the suture as it is distant from the median cord; the median cord is midway between the other two. In addition to the spiral cords, the whorls are marked by axial ribs almost as strong as the spiral cords. Of these ribs, 16 occur upon the first to third, 18 upon the fourth to sixth, 20 upon the seventh, and 22 upon the penultimate turn. The junction of the axial ribs and the spiral cords, form tubercles, while the spaces inclosed between them appear as well impressed, rounded pits. The tubercles on the cords at the summit are well rounded, those on the other two cords are truncated posteriorly, sloping gently anteriorly. Sutures channeled. Periphery marked by a very strong, smooth, spiral cord, the space between which, and the suprasutural cord, is crossed by the continuation of the axial ribs. Base moderately long, moderately rounded, marked by a strong spiral cord at the insertion of the columella. Aperture decidedly channeled anteriorly, feebly so at the posterior angle, rounded; outer lip rendered sinuous by the external sculpture; columella very stout, covered on the inner edge by a thick callus which extends over the parietal wall, connecting with the outer lip at the posterior angle and rendering the peritreme complete.

The type and the specimens, Cat. No. 249688, U.S.N.M., come from Port Alfred (Coll. No. 960). The type has a portion of the last nuclear whorl and a little more than eight postnuclear turns and measures: Length, 3.4 mm.; diameter, 1.1 mm. Cat. No. 250360, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1233).

## CERITHIOPSIS, species?

Cat. No. 249691, U.S.N.M., contains two specimens from Port Alfred, of a short, light brown, oval species (Coll. No. 963). I can not identify these with any of the known forms, and they are too poor to serve for a diagnosis of a new species.

## CERITHIOPSIS (CERITHIOPSIS) SABA, new species.

Plate 12, fig. 8.

Shell small, ovoid, chocolate brown, excepting the tubercles of the spiral cord at the summit, which are smoky white. A portion of the last nuclear turn only remains, which is white and smoky. Post-nuclear whorls well rounded, marked by three strong spiral cords, of

which the first is at the summit, while the third is about as far above the suture as it is distant from the cord adjacent to it posteriorly, median cord being a little nearer than that a little anterior to it. In addition to the spiral cords the whorls are marked by strong axial ribs, of which 18 occur upon all the whorls. The intersection of the spiral cords and the axial ribs, form very strong tubercles, while the spaces inclosed between them appear as well impressed, oval pits, the long axis of which coincides with the spiral sculpture. The tubercles of the cord at the summit are well rounded; those of the other two cords are truncated anteriorly, sloping posteriorly; those of the median cord a little less so than those of the suprasutural cord. Sutures strongly channeled. Periphery of the last whorl marked by a sulcus which is as strong as that between the median and the suprasutural cord and like that crossed by the continuations of the axial ribs which extend over the cord anteriorly to the peripheral sulcus and renders this slightly tuberculated. Base marked by two spiral cords, the first immediately anterior to the peripheral sulcus, the other one occupying a position half way between this and the tip of the columella. Columella anterior to the second cord is crossed by several slender spiral threads. Aperture moderately large, decidedly channeled anteriorly; outer lip rendered sinuous by the external sculpture; inner edge of the columella covered with a thick callus which extends over the parietal wall, rendering the peritreme complete.

The type, Cat. No. 249690, U.S.N.M., comes from Port Alfred (Coll. No. 962). It has six and a half postnuclear whorls, and measures: Length, 3.8 mm.; diameter, 1.5 mm.

*CERITHIOPSIS*, species?

Cat. No. 250356, U.S.N.M., contains a worn specimen from Port Alfred (Coll. No. 1229). This is different from any we know from the region, but is too poor to be described.

Genus *SEILA* A. Adams.

*SEILA ALFREDENSIS*, new species.

Plate 5, fig. 6.

Shell very elongate-conic, light chestnut brown, maculated with blotches and spots of white. Nuclear whorls three, smooth, well rounded, white, forming a bulbous apex, the first turn being the largest. Postnuclear whorls moderately rounded, ornamented with four strong, flattened, subequal and subequally spaced spiral cords, of which the first is at the shouldered summit, while the anterior portion of the last abuts the summit of the succeeding whorls. The spaces inclosed between these cords are about as wide as the cords



and are crossed by numerous slender, quite regular, and regularly spaced axial riblets, which extend up on the sides of the spiral cords, but do not cross their summit. In addition to these axial riblets, the grooves between the cords are marked with many very fine, incised, spiral lines. Sutures moderately constricted. Periphery of the last turn angulated, the angle being formed by the fourth spiral cord. Base short, well rounded, marked by two spiral grooves, one of which forms the boundary for the anterior keel between the sutures, and is crossed by slender axial riblets like the spiral grooves on the spire, while the other, which is less strong, limits the columella. The space between these two grooves is crossed by numerous, fine, spiral striations and incremental lines. Aperture moderately large, subquadrate, decidedly channeled anteriorly. Posterior angle very obtuse; outer lip thick, rendered sinuous by the external spiral cords; columella short, strongly curved, and slightly reflected over the reinforcing base; parietal wall glazed with a moderately strong callus.

There are eight specimens of this species in the United States National Museum. Cat. No. 186802, collected at Port Alfred (Coll. No. 167). Two of these have served as cotypes, one having nuclear characters and the other showing the adult structures. Our figure is a composite one built upon these two specimens. The smaller of these two specimens has ten postnuclear whorls, and measures: Length, 8.5 mm.; diameter, 2.5 mm. The adult specimen, having lost the nuclear and the early whorls, has 10 whorls remaining, which measure: Length, 10 mm.; diameter, 3.1 mm.

*SEILA AFRICANA*, new species.

Plate 17, fig. 6.

Shell regularly elongate-conic, chestnut brown, a little lighter on the early whorls. (Nuclear whorls decollated). Postnuclear whorls flattened, marked with strong flattened spiral keels, of which three occur upon all the whorls between the sutures. The first of these is a little anterior to the summit, leaving a somewhat concave shoulder at the summit; the last is an equal distance above the suture; while the second is midway between the two. These keels are separated by deep, concave grooves which are a little wider than the keels. In addition to these spiral keels, the whorls are marked by exceedingly fine, closely-spaced, axial, raised threads, which cross the deep grooves that separate the spiral keels, the sutures appearing like the grooves on the whorl. On the last three whorls the summit of the turns falls slightly anterior to the peripheral cord, which shows partly in the suture. Periphery of the last whorl decidedly angulated, marked by a cord a little less strong than those occurring upon the spire. Base moderately long, well rounded, marked by two spiral cords, of which the first is about as far anterior to the peripheral



cord as that is from the one posterior to it; while the second, which is considerably more slender, is a little posterior to the insertion of the columella, the insertion of the columella being marked by a strongly impressed groove. In addition to the above sculpture, the entire base is marked by numerous, very slender, raised axial threads and exceedingly fine, spiral, striations. Aperture subcircular, decidedly channeled anteriorly; posterior angle obtuse; outer lip thin, rendered sinuous by the spiral keels; columella short, strongly curved and reflected over and appressed to the base; parietal wall covered with a thin callus.

The type and three specimens of this species Cat. No. 187043, U.S.N.M., come from Port Alfred (Coll. No. 581). The type has 10 postnuclear whorls and measures: Length, 7.6 mm.; diameter, 2.2 mm. The present species is much smaller than *S. alfredensis*. In coloration it is uniform chestnut brown, while *S. alfredensis* is maculated. The axial sculpture consists of much finer and much more numerous raised threads in *africana* than in *alfredensis*. The base of the present species has two spiral cords, while in *alfredensis* we have two incised lines only.

Two additional lots from Port Alfred are in the collection of the United States National Museum. Cat. No. 249686, 4 specimens (Coll. No. 958). Cat. No. 249687, 4 specimens (Coll. No. 959.)

SEILA SMITHI, new species.

Plate 12, fig. 7.

Shell very slender, elongate-conic, light chestnut brown, the tip a little lighter. First half of the nuclear turns smooth, the succeeding two and a half, well rounded, marked by two spiral threads and numerous, fine axial riblets, which are best expressed near the summit. Postnuclear whorls well rounded, marked by strong, somewhat flattened, equal and equally spaced, sublamellar spiral cords, of which 5 occur between the sutures, the first being at the summit, which it renders shouldered, and the last at the suture. The sulci, between the cords, are a little wider than the cords and are crossed by exceedingly numerous, very slender, slightly retractive axial threads. Sutures strongly constricted. Periphery of the last whorl marked by a strong spiral cord, which appears in the suture of the preceding whorls and furnishes the fifth cord on the spire. Base short, slightly concave on the posterior half, marked by very slender spiral threads at the insertion of the columella and lines of growth only. Aperture strongly channeled anteriorly; posterior angle obtuse; outer lip thin, rendered sinuous by the external sculpture, which shows through the substance of the outer lip; columella short, slightly curved, covered with a thin callus which extends up on the parietal wall.

The type, Cat. No. 250397, U.S.N.M., comes from Port Alfred (Coll. No. 1270). It has nine whorls, and measures: Length, 3.2 mm.; diameter, 0.8 mm.

Genus *EUMETA* Mörch.

*EUMETA BIA*, new species.

Plate 12, fig. 4.

Shell elongate-conic, white, subdiaphanous. Nuclear whorls almost three, inflated, well rounded, smooth. Postnuclear whorls slightly shouldered at the summit, well rounded, marked by three spiral cords, of which the first, which is at the summit, is a little less strong than the other two, the third is a little posterior to the suture, while the median is a little nearer the suprasutural cord than the one at the summit. In addition to the spiral cords, the whorls are marked by slender, almost vertical axial ribs, of which 22 occur upon all the whorls but the last, which has 26. The junction of the axial ribs and spiral cords form very feeble nodules, while the spaces inclosed between them appear as squarish, well-impressed pits. In addition to the sculpture the entire surface of the spire is marked by fine lines of growth and exceedingly fine spiral striations. Sutures strongly constricted. Periphery of the last whorl marked by a sulcus which is almost as wide as the sulcus separating the suprasutural cord from the median, and like this, it is crossed by the axial riblets. Base marked by a strong spiral cord bounding the peripheral sulcus, the rest is slightly concave and marked by feeble lines of growth and exceedingly fine spiral striations only. Aperture quite large, strongly channeled anteriorly; outer lip thin, rendered sinuous at the edge by the external sculpture which shows through the substance of the lip; columella stout, curved; parietal wall glazed by a thin callus.

The type, Cat. No. 250367 U.S.N.M., comes from Port Alfred (Coll. No. 1240). It is a young specimen having four postnuclear whorls only, and measures: Length, 2.7 mm.; diameter, 0.1 mm.

Family CERITHIIDAE.

Genus *CERITHIUM* Bruguiere.

*CERITHIUM CONTRACTUM* Sowerby.

Cat. No. 97995, U.S.N.M., six specimens from Albany, received from the Albany Museum. Cat. No. 186801, U.S.N.M., two specimens from Port Alfred (Coll. No. 166).

*CERITHIUM VULGATUM* Linnaeus.

Cat. No. 187042, U.S.N.M., one specimen from Port Alfred (Coll. No. 579).

*CERITHIUM CRASSILABRUM* Krauss.

Cat. No. 249689, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 961).

*CERITHIUM (POTAMIDES) DECOLLATA* Linnaeus.

Cat. No. 18603, U.S.N.M., one specimen from Natal. Cat. No. 272132 U.S.N.M., four from Port Elizabeth.

## Family PLANAXIDAE.

## Genus PLANAXIS Lamarck.

*PLANAXIS PYRAMIDALIS* Deshayes.

Cat. No. 21804, U.S.N.M., one specimen collected by Dunker at Algoa Bay.

## Family CAECIDAE.

## Genus CAECUM Fleming.

*CAECUM GLABRATUM* Montagu.

Cat. No. 227809, U.S.N.M., four specimens from Port Alfred (Coll. No. 904). Cat. No. 249793, U.S.N.M., one specimen from the same locality (Coll. No. 1065).

## Family VERMETIDAE.

## Genus VERMICULARIA Lamarck.

*VERMICULARIA*, species ?

Cat. No. 187125, U.S.N.M., four worn specimens from Port Alfred (Coll. No. 671). Cat. No. 250540, U.S.N.M., contains three additional specimens from the same locality (Coll. No. 1413).

*VERMICULARIA*, species ?

Cat. No. 187120, U.S.N.M., four specimens of another species of *Vermicularia*, too fragmentary to be positively identified, from Port Alfred (Coll. No. 666). Cat. No. 227787, U.S.N.M., three specimens from the same locality (Coll. No. 882).

There are three lots of this species in the collection of the United States National Museum all from Port Alfred. Cat. No. 187124, four specimens (Coll. No. 670). Cat. No. 187127, one specimen (Coll. No. 673). Cat. No. 250541, three specimens (Coll. No. 1414).

Cat. No. 187122, U.S.N.M., two specimens of a fourth species from Port Alfred (Coll. No. 668) likewise too poor to be specifically determined. Cat. No. 250539, U.S.N.M., contains two additional specimens from Port Alfred (Coll. No. 1412).

## Genus SILIQUARIA Bruguiere.

*SILIQUARIA (PYXIPOMA) WELDI* Tenison-Woods.

Cat. No. 187119, U.S.N.M., four specimens from Port Alfred (Coll. No. 665).

## SILICUARIA, species ?

Five lots of another species of *Silicuarina* are in the collection of the United States National Museum, all from Port Alfred. We have been unable to identify these species. They are: Cat. No. 187149, three specimens (Coll. No. 696). Cat. No. 249789, three specimens (Coll. No. 1061). Cat. No. 250521, one specimen (Coll. No. 1394). Cat. No. 250522, one specimen (Coll. No. 1395). Cat. No. 250523, one specimen (Coll. No. 1396).

## Family TURRITELLIDAE.

## Genus TURRITELLA Lamarck.

## TURRITELLA PUNCTICULATA Sowerby.

Cat. No. 225, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at False Bay, Cape of Good Hope. Cat. No. 250406, U.S.N.M., contains a young specimen from Port Alfred (Coll. No. 1279).

## TURRITELLA CARINIFERA Lamarck.

Cat. No. 187, U.S.N.M., four specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. Cat. No. 43015, U.S.N.M., three specimens from Cape of Good Hope. Cat. No. 77223, U.S.N.M., two specimens collected by Dr. Newcomb at Cape of Good Hope. Cat. No. 186809, U.S.N.M., three specimens from Port Alfred (Coll. No. 175). Cat. No. 17246, U.S.N.M., three specimens from the Cape of Good Hope.

## TURRITELLA ANNULATA Kiener.

Cat. No. 187040, U.S.N.M., one specimen from Port Alfred (Coll. No. 577). Cat. No. 250407, U.S.N.M., contains an additional specimen from Port Alfred (Coll. No. 1280).

## TURRITELLA STIMPSONI, new species.

Plate 5, fig. 8.

Shell very elongate-conic, yellowish white, streaked at irregular intervals with light brown. Nuclear whorls  $1\frac{3}{4}$ , well rounded, smooth. Postnuclear whorls appressed at the summit, having two very strong spiral cords, the first of which is on the middle of the whorl, while the second is half way between this and the suture. A third slender thread is situated half way between the two cords and the suture. The portion of the shell between the summit and the first spiral keel forms a slightly concave shoulder, while the space between the two keels forms a deep, broad, concave channel, the space between the second keel and the suture being likewise somewhat concave. In addition to the above sculpture, the entire surface of the spire is marked with fine incremental lines and very fine, closely spaced, spiral striations. Periphery of the last whorl well angulated by a

spiral cord which is a little less strong than those occurring on the spire. Base short, almost flattened, marked with lines of growth and exceedingly fine, spiral striations. Aperture irregular, subquadrate, somewhat effuse at the junction of the basal wall with the outer lip; posterior angle obtuse; outer lip very thin, rendered sinuous by the external sculpture, which is shown within by transmitted light; columella very slender, decidedly curved, and slightly reflected over and appressed to the base; parietal wall covered with a thin callus.

The type and seven additional specimens, Cat. No. 193, U.S.N.M., were collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. The type has  $14\frac{1}{2}$  whorls, and measures: Length, 20.5 mm.; diameter, 5.8 mm.

**TURRITELLA KOWIENSIS** Sowerby.

Four lots of this species are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 186809, one specimen (Coll. No. 175). Cat. No. 187038, two specimens (Coll. No. 575). Cat. No. 187039, two specimens (Coll. No. 576). Cat. No. 250405, one specimen (Coll. No. 1278).

**TURRITELLA CAPENSIS** Krauss.

Cat. No. 19317, U.S.N.M., one specimen labeled South Africa without specific locality designation.

**TURRITELLA KNYSNAENSIS** Krauss.

Cat. No. 192, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay.

**TURRITELLA**, species.?

Cat. No. 187041, U.S.N.M., one specimen too poor to be positively determined, from Port Alfred (Coll. No. 578).

**TURRITELLA**, species.?

Cat. No. 250397, U.S.N.M., contains the type of a young, very slender, white species from Port Alfred, which we are unable to identify (Coll. No. 1270).

Family LITTORINIDAE.

Genus LITTORINA Ferussac.

**LITTORINA AFRICANA** Philippi.

Cat. No. 18822, U.S.N.M., 3 specimens from Natal. Cat. No. 189478, U.S.N.M., 110 specimens from Cape of Good Hope. Cat. No. 189479, U.S.N.M., 8 specimens from the same locality. Cat. No. 186811, U.S.N.M., 6 specimens from the same place (Coll. No. 177). Cat. No. 187092, U.S.N.M., 2 specimens from Port Alfred (Coll. No. 636).



## LITTORINA AFRICANA TRYPHENA, new subspecies.

Plate 38, fig. 6.

This subspecies of *L. africana* is of similar coloration as *africana*, but always more slender, in fact, pupoid in shape. The type and another specimen, Cat. No. 187091, U.S.N.M., come from Port Alfred (Coll. No. 635). The type has  $4\frac{1}{2}$  whorls, and measures: Length, 7 mm.; diameter, 4.6 mm. Four additional lots are in the collection of the United States National Museum from Port Alfred. Cat. No. 187090, one specimen (Coll. No. 634). Cat. No. 250509, two specimens (Coll. No. 1382). Cat. No. 250510, one specimen (Coll. No. 1383). Cat. No. 250511, one specimen (Coll. No. 1384).

## LITTORINA KNYSNAENSIS Krauss.

Cat. No. 116, U.S.N.M., six specimens collected by William Stimpson on the North Pacific Exploring Expedition at Cape of Good Hope. Cat. No. 21810, U.S.N.M., one specimen collected at Algoa Bay by Dunker. Cat. No. 98054, U.S.N.M., 84 specimens from the Albany Museum, which were collected at the mouth of Bushmans River. Cat. No. 186810, U.S.N.M., four specimens from Port Alfred (Coll. No. 176). Cat. No. 18795, U.S.N.M., five specimens collected by William Stimpson on the North Pacific Exploring Expedition at Port Elizabeth. Cat. No. 31850, U.S.N.M., five specimens from the Cape of Good Hope.

## LITTORINA AHENEA Reeve.

Cat. No. 187089, U.S.N.M., one specimen from Port Alfred (Coll. No. 632).

## Genus TECTARIUS Valenciennes.

## TECTARIUS NATALENSIS Krauss.

Cat. No. 18823, U.S.N.M., three specimens from Natal.

## Genus CITHNA A. Adams.

## CITHNA AFRICANA, new species.

Plate 21, fig. 5.

Shell very minute, subglobular, moderately, deeply umbilicated, semitranslucent. Nuclear whorls about one and a third, scarcely differentiated from the rest of the turns. All the whorls well rounded, without sculpture, separated by a moderately constricted suture. Periphery and base of the last whorl well rounded, the latter moderately umbilicated, the outer edge of the umbilicus angulated. Aperture oval; outer lip rather thick, thinning toward the edge; the inner lip oblique, joined with a thin callus on the parietal wall, which renders the peritreme complete.

The type, Cat. No. 250498, U.S.N.M., comes from Port Alfred (Coll. No. 1371). It has almost three postnuclear whorls, and measures: Length, 0.7 mm.; diameter, 0.7 mm.

## Family LITIOPIDAE.

## Genus ALABA A. Adams.

## ALABA PINNAE Krauss.

There are three lots of this species in the United States National Museum, all from Port Alfred. Cat. No. 186813, seven specimens (Coll. No. 179). Cat. No. 187052, eight specimens (Coll. No. 590). Cat. No. 250413, one specimen (Coll. No. 1286).

## Genus ALABINA Dall.

## ALABINA ALFREDENSIS, new species.

Plate 5, fig. 7.

Shell elongate-conic, white. Nuclear whorls about two and one-half, smooth, well rounded. Postnuclear whorls with a strong sloping shoulder which extends over the posterior half of the whorls and is bounded anteriorly by a median spiral keel. A second keel, a little less strong than the median, occupies the space halfway between the suture and the median keel. In addition to the above sculpture the whorls are marked on the anterior half, between the sutures, by ill-defined axial ribs which lend the two keels a slightly tuberculated appearance. About twelve of these feeble tubercles occur upon the antipenultimate whorls. Periphery and base of the last whorl well rounded, the latter smooth, excepting feeble lines of growth. Aperture moderately large; outer lip thin; columella slightly curved and feebly revolute; parietal wall glazed with a thin callus.

The type, Cat. No. 187053, U.S.N.M., comes from Port Alfred (Coll. No. 591). It has nine and one-half post-nuclear whorls, and measures: Length, 3.2 mm.; diameter, 1.2 mm.

## ALABINA AFRICANA, new species.

Plate 12, fig. 1.

Shell small, elongate-conic, semitransparent, white. Nuclear whorls one and a half, well rounded, separated by a strongly constricted suture, and marked by four strong, equal and equally spaced, spiral keels. Postnuclear whorls well rounded, marked by almost vertical, well rounded, quite regular, axial ribs, of which 14 occur upon the first and second, 16 upon the third and fourth, 18 upon the fifth and the penultimate turn. In addition to the axial ribs, the whorls are marked by two spiral cords a little anterior and posterior to the middle of the space between the sutures. The junction of the axial ribs and the spiral cords forms tubercles, which are truncated posteriorly and slope gently anteriorly, while the spaces inclosed between them appear as well impressed pits. Sutures strongly constricted. Periphery of the last whorl marked by a strong, smooth, spiral cord. Base short, slightly concave, smooth. Aperture subcircular; pos-

terior angle decidedly obtuse; outer lip thin, showing the external sculpture within, which renders the outer lip sinuous at the edge; columella oblique, very thin, and slightly revolute.

The type, Cat. No. 250396, U.S.N.M., comes from Port Alfred (Coll. No. 1269). It has seven postnuclear whorls, and measures: Length, 2 mm.; diameter, 0.7 mm.

Genus *DIALA* A. Adams.

*DIALA INFRASULCATA* Sowerby.

Three specimens, Cat. No. 187070, U.S.N.M., from Port Alfred (Coll. No. 608). Cat. No. 187071, three specimens from Port Alfred (Coll. No. 609).

*DIALA AFRICANA*, new species.

Plate 6, fig. 1.

Shell elongate-conic, subdiaphanous. Nuclear whorls scarcely differentiated from the postnuclear turns. Postnuclear whorls strongly rounded, marked by numerous lines of growth and exceedingly fine spiral striations; the summits of the whorls are appressed to the preceding turns and allow these to shine through them, which gives the shell the aspect of having a double suture; sutures strongly constricted. Periphery of the last whorl somewhat inflated, well rounded. Base broadly umbilicated, well rounded, marked like the spire. Aperture large; outer lip thin, translucent; inner lip free, strongly curved, and somewhat reflected over the umbilicus; parietal wall glazed by a thin callus.

The type, Cat. No. 187063, U.S.N.M., comes from Port Alfred (Coll. No. 601). It has seven and one-half whorls, and measures: Length, 4.8 mm.; diameter, 2.1 mm.

The following specimens from Port Alfred are in the collection of the United States National Museum: Cat. No. 187067, one specimen (Coll. No. 605). Cat. No. 227746, three specimens (Coll. No. 841). Cat. No. 249722, two specimens (Coll. No. 994). Cat. No. 250424, three specimens (Coll. No. 1297). Cat. No. 250434, two specimens (Coll. No. 1307). In addition to these I have seen two lots, also from Port Alfred: (Coll. No. 1599), two specimens and (Coll. No. 1593), 30 specimens, which were returned to Colonel Turton.

*DIALA DUBIA* Sowerby.

The United States National Museum has seven lots of this species from Port Alfred. Cat. No. 186812, 5 specimens (Coll. No. 178). Cat. No. 187060, 2 specimens (Coll. No. 598). Cat. No. 187464, 1 specimen (Coll. No. 602). Cat. No. 187065, 2 specimens (Coll. No. 603). Cat. No. 227744, 3 specimens (Coll. No. 839). Cat. No. 249725, 2 specimens (Coll. No. 997). Cat. No. 250430, 2 specimens (Coll. No. 1303). Cat. No. 250433, 2 specimens (Coll. No. 1306). Cat. No. 252202, 15 specimens (Coll. Nos. 1591 and 1597). (In addi-

tion to these I have seen four lots which have been returned to Colonel Turton, all from Port Alfred; they are: (Coll. No. 1591) 45 specimens. (Coll. No. 1595) 14 specimens. (Coll. No. 1597) 172 specimens. (Coll. No. 1598) 44 specimens.

*DIALA CAPENSIS*, new species.

Plate 6, fig. 10.

Shell small, subcylindric, pupiform, semitranslucent, pale yellow. Nuclear whorls not differentiated from the postnuclear turns. Postnuclear whorls somewhat inflated, appressed at the summit, through which the preceding whorl is visible, which lends the shell the appearance of having a double suture. The entire surface of the shell is marked by numerous retractive lines of growth and exceedingly fine spiral striations. Sutures strongly constricted. Periphery of the last whorl rounded. Base well rounded, narrowly umbilicated. Aperture moderately large, oval, outer lip very thin; inner lip strongly curved and slightly reflected over the umbilicus. Parietal wall covered with a thin callus.

The type, Cat. No. 187068a, comes from Port Alfred. (Coll. No. 606.) It has six and one-half postnuclear whorls, and measures: Length, 2.5 mm.; diameter, 1.1 mm.

*DIALA ALMO*, new species.

Plate 6, fig. 2.

Shell minute, broadly conic, with truncated apex, semitranslucent. Nuclear whorls not differentiated from the postnuclear turns. Postnuclear whorls feebly rounded, appressed at the summit, through which the preceding turn shows, lending the surface the aspect of having a double suture. Entire surface of the shell marked by fine lines of growth. Sutures feebly impressed. Periphery of the last whorl strongly inflated. Base well rounded, broadly umbilicated. Aperture very large; ovate; posterior angle obtuse; outer lip thin, decidedly flaring; inner lip curved and somewhat flexuous, slightly reflected over the umbilicus; parietal wall distinct, rendering the peritreme complete.

The type, Cat. No. 187066, U.S.N.M. comes from Port Alfred, (Coll. No. 604). It has five whorls, and measures: Length, 2 mm.; diameter, 1.2 mm. We have seen seven additional specimens from Port Alfred (Coll. No. 593), which have been returned to Colonel Turton.

Family SOLARIIDAE.

Genus *HELIACUS* Orbigny.

*HELIACUS AFRICANUS*, new species.

Plate 24, figs. 1, 3, 5.

Shell lenticular, brown, blotched and spotted with white and yellow. Nuclear whorls about one and a half, smooth; upper surface

of the succeeding turns slightly rounded, ornamented with five nodulose spiral cords, of which the first, at the summit, and the last, at the periphery, are the widest, the three intermediate ones being of about equal width. The spaces separating these spiral cords are strongly incised, narrow channels. In addition to the spiral cords, the whorls are marked by low, retractive, axial ribs, of which 67 occur upon the last turn. The junction of the axial ribs and the spiral cords, form low, rounded, elongated tubercles, the long axis of which corresponds with the axial sculpture. Base moderately rounded, marked with low spiral cords, of which the two adjacent to the umbilicus are about doubly as wide as the rest; the one bordering the umbilicus renders the edge of this crenulated. In addition to these spiral cords the base is marked by the continuation of the axial ribs, the junction of which, with the spiral cords, renders these nodulose. The nodules, on the two cords near the umbilicus are elongate, having the long axis parallel with the spiral sculpture, while those on the rest of the cords are more or less rounded. There is a deep sinus between the peripheral cord and the basal cord, fully twice as wide as any of the sulci on the rest of the spire. Two slender spiral threads are present in the sulcus. The parietal wall of the umbilicus is marked with two moderately strong spiral cords. Aperture subcircular, rendered somewhat sinuous by the external sculpture; columella very stout, provided with two low, rounded, spiral cords which divide it into two equal parts.

The type and another specimen, Cat. No. 249757, U.S.N.M., come from Port Alfred (Coll. No. 1029). The type has almost four post-nuclear whorls and measures: Greatest diameter, 9.6 mm.; lesser diameter, 9 mm.; altitude, 4.6 mm. Cat. No. 186824, U.S.N.M., contains two additional specimens from the same locality (Coll. No. 190). Cat. No. 249758, U.S.N.M., contains two specimens from the same source (Coll. No. 1030).

There is considerable variation in the width of the umbilicus of this species, the following two having an umbilicus fully twice as wide as the specimens alluded to above. In addition to this increased width of umbilicus, they also have a little larger number of axial riblets. Cat. No. 249756, U.S.N.M., one specimen from Port Alfred (Coll. No. 1028). Cat. No. 186823, U.S.N.M., another specimen from the same place (Coll. No. 189). Cat. No. 250560*a*, U.S.N.M., contains a very young tip of another specimen from the same place (Coll. No. 1433*a*).

**HELIACUS LUTEUS** Lamarck.

Cat. No. 102725, U.S.N.M., a specimen from the Cape of Good Hope.

**HELIACUS**, species?

Cat. No. 250502, U.S.N.M., contains a young *Helicac* from Port Alfred which is smooth, excepting a band at the periphery and two



nodulose, spiral zones about the umbilicus. I am unable to identify it with any of the described species, and it is too worn to serve for a diagnosis of a new form. (Coll. No. 1375.) Cat. No. 187095, U.S.N.M., contains another specimen from the same place. (Coll. No. 639.)

### Family RISSOIDAE.

#### Genus NODULUS Monterosato.

##### NODULUS PERSPECTUS Smith.

Cat. No. 186819, U.S.N.M., two specimens from Port Alfred (Coll. No. 185).

##### NODULUS AFRICANUS, new species.

Plate 31, fig. 5.

Shell cylindro-conic, white. Nuclear whorls one and a third, smooth, polished, well rounded. Postnuclear whorls rather high between the sutures, appressed at the summit, well rounded, excepting the area immediately below the appressed summit on the later turns, which is slightly concave. Entire surface marked by numerous, very closely spaced, microscopic, spiral striations and exceedingly fine, retractive lines of growth. Periphery of the last whorl well rounded; base prolonged, moderately rounded; aperture subcircular; outer lip thick, within shelving to a thin edge; inner lip reflected, almost vertical; parietal wall covered by a thick callus which renders the peritreme complete.

The type, Cat. No. 250422, U.S.N.M., comes from Port Alfred (Coll. No. 1295). It has  $4\frac{3}{4}$  postnuclear turns and measures: Length, 1.4 mm.; diameter, 0.6 mm. The present species differs from *Nodulus perspectus* Smith by being cylindro-conic, instead of ovate, as well as in other characters.

#### Genus SABANAEA Monterosato.

##### SABANAEA PYRRHA, new species.

Plate 6, fig. 7.

Shell minute, ovate. Early whorls pale smoky brown, the later ones white. Nuclear whorls apparently not differentiated from the postnuclear turns. All the whorls well rounded, smooth, and appressed at the summit. Sutures feebly impressed. Periphery of the last whorl obscurely angulated. Base short, almost concave in outline, impressed at the umbilical area, and slightly attenuated anteriorly. Aperture subcircular, with a very thick peristome. Posterior angle obtuse; outer lip thick; inner lip very thick, curved and appressed to the base; parietal wall covered with a thick callus, which joins the posterior angle of the aperture to the inner lip.

The type and two specimens, Cat. No. 187062, U.S.N.M., come from Port Alfred (Coll. No. 600). The type has four postnuclear whorls, and measures: Length, 1.3 mm.; diameter, 1 mm. Cat. No. 250427, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 1300).

**SABANAEA THALIA, new species.**

Plate 6, fig. 6.

Shell pupiform, with blunt apex, subdiaphanous. Nuclear whorls not differentiated from the later turns; all whorls strongly rounded and appressed at the summit, through which the preceding whorl shines, which gives the whorls the aspect of having a double suture. Spire marked with decidedly retractive lines of growth, and exceedingly fine, spiral striations. Sutures moderately constricted. Periphery of the last whorl well rounded. Base moderately long, umbilicated, well rounded, slightly attenuated anteriorly, marked like the spire. Aperture subcircular, posterior angle obtuse; outer lip thin; inner lip thin, strongly curved, free, slightly reflected over the umbilicus; parietal wall covered with a thick callus, which is free at the edge, and renders the peritreme complete. The type and two specimens, Cat. No. 187058, U.S.N.M., come from Port Alfred (Coll. No. 596). The type has six whorls, and measures: Length, 1.7 mm.; diameter, 0.8 mm. Cat. No. 227742*a*, U.S.N.M., contains two specimens from the same locality (Coll. No. 837), and Cat. No. 227743, U.S.N.M., seven specimens from the same source (Coll. No. 838). In addition to these, we have seen 105 specimens from Port Alfred which have been returned to Colonel Turton (Coll. No. 1594).

**Genus AMPHITHALAMUS Carpenter.**

**AMPHITHALAMUS TURTONI, new species.**

Plate 6, fig. 5.

Shell very minute, pupiform, pale horn color. Nuclear whorls one and one-half, marked with many, exceedingly fine, spiral striations and lines of growth, the combination of the two lending these whorls an exceedingly finely pitted appearance. Postnuclear whorls rather high between the sutures, appressed at the summit, well rounded, marked by fine, decidedly retractive lines of growth. Sutures strongly constricted. Periphery of the last whorl well rounded. Base attenuated anteriorly, marked like the spire. Aperture oval; outer lip thick within, thin at the edge; inner lip decidedly curved; parietal wall built out to form a shelf, the inner edge of which forms the parietal lip of the aperture.

The type and nine specimens of this species, Cat. No. 187061, U.S. N.M., were collected at Port Alfred (Coll. No. 599). The type has a little more than four whorls, and measures: Length, 1 mm.; diameter, 0.5 mm.

Two additional lots, both from Port Alfred, are in the collection of the United States National Museum. Cat. No. 250416, one specimen (Coll. No. 1289), the other Cat. No. 250417, one specimen (Coll. No. 1290).

**AMPHITHALAMUS AFRICANUS**, new species.

Plate 21, fig. 6.

Shell minute, elongate-conic, semitransparent. Nuclear whorls one and a half, well rounded, smooth. Postnuclear whorls almost three, strongly rounded, appressed at the summit, marked by numerous, regular, fine, decidedly retractive axial riblets, the spaces between which are about one and a half times as wide as the riblets. Sutures strongly constricted. Periphery of the last whorl well rounded. Base somewhat produced, marked like the spire by the continuations of the riblets. Aperture broadly oval, decidedly oblique; outer lip thin; inner lip strongly curved at some little distance from the parietal wall. The space between the inner edge of the outer lip and the parietal wall form a shelf, as is usual in *Amphithalamus*.

The type, Cat. No. 250415, U.S.N.M., comes from Port Alfred (Coll. No. 1288). It measures: Length, 1.2 mm.; diameter, 0.5 mm.

**Genus ALVANIA** Risso.

**ALVANIA NEMO**, new species.

Plate 5, fig. 3.

Shell small, elongate-ovate, yellowish white. Nuclear whorls one and one-half, well rounded, smooth. Postnuclear whorls inflated, strongly rounded, marked between the sutures by very regular, well developed, evenly spaced spiral cords, of which four occur upon the second and third, and 6 upon the penultimate turn. The space between the appressed summit and the first spiral cord is a little wider than those between the other cords. In addition to the spiral cords the whorls are marked by feeble incremental lines. Periphery of the last whorl inflated. Base moderately long, well rounded, narrowly umbilicated, marked with two, feeble, spiral cords and fine, incremental lines. Aperture broadly oval; posterior angle obtuse; outer lip thin, showing the external sculpture within; columella strongly curved, free, partly reflected over the umbilicus; parietal wall glazed with a thin callus.

The type, Cat. No. 187057a, U.S.N.M., comes from Port Alfred (Coll. No. 595). It has almost four postnuclear whorls, and measures: Length, 1.8 mm.; diameter, 1 mm.

The following four additional lots from Port Alfred are in the collection of the United States National Museum. Cat. No. 250403, two specimens (Coll. No. 1276). Cat. No. 250402, two specimens.

(Coll. No. 1275). Cat. No. 250401, two specimens (Coll. No. 1274). Cat. No. 252277, 10 specimens (Coll. No. 1586). Thirty-five specimens with the same collector's number were returned to Colonel Turton.

*ALVANIA FARQUHARI* Smith.

Plate 5, fig. 5.

Cat. No. 187057, U.S.N.M., two specimens from Port Alfred (Coll. No. 595). Cat. No. 227740, U.S.N.M., three specimens from the same locality (Coll. No. 835). In addition to these, I have seen 40 specimens in Colonel Turton's collection (Coll. No. 1586).

*ALVANIA ALFREDENSIS*, new species.

Plate 21, fig. 8.

Shell elongate-conic, white. The nucleus consists of a single turn which appears to be smooth. The succeeding turn is well rounded, the next, strongly shouldered on the middle, while the last is slightly concave immediately below the suture, and the rest well rounded. The second whorl is marked with six slender spiral cords, which are about as wide as the spaces that separate them. On the following turn a broad cord appears at the appressed summit and four slender ones on the space between the summit and the angulated shoulder; the shoulder itself being marked by a stronger spiral cord, while the space anterior to it bears three about as strong as the last. On the penultimate whorl 12, equal and equally spaced, spiral cords appear between the summit and the posterior termination of the outer lip, and six upon the base. These cords are equal and equally spaced and are about as wide as the spaces that separate them. Aperture apparently oval; outer lip fractured; inner lip rather thick, almost vertical, and somewhat reflected over the base; parietal wall covered by a moderately thick callus.

The type, Cat. No. 250392, U.S.N.M., comes from Port Alfred (Coll. No. 1265). It has four postnuclear whorls, and measures: Length, 1.5 mm.; diameter, 0.6 mm.

*ALVANIA ALMO*, new species.

Plate 21, fig. 7.

Shell elongate-ovate, thin, semitranslucent. Nuclear whorls one and a half, well rounded, smooth. Postnuclear turns marked by two strong, spiral keels, the first of which is situated about two-thirds of the distance between the summit and the suture anterior to the summit, while the second is about one-fifth of the distance above the suture, leaving the space between the two, equal to about two-fifths of the distance. The space between the summit and the first keel, forms a strongly sloping shoulder, while the space between the two

keels is almost flat. Periphery of the last whorl marked by a strong, spiral cord. Base well rounded, marked by three subequal and equally spaced, low, spiral cords. In addition to the spiral marking, the whorls are marked by numerous, very fine lines of growth. Aperture broadly ovate; posterior angle obtuse; outer lip thin, showing the external sculpture within; inner lip thin, slightly reflected; parietal wall covered with a thick callus which renders the peritreme complete.

The type, Cat. No. 250394, U.S.N.M., comes from Port Alfred (Coll. No. 1267). It has three postnuclear whorls, and measures: Length, 2.1 mm.; diameter, 1.3 mm.

*ALVANIA ARGENTEA* Sowerby.

Four lots of this species are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 186820, two specimens (Coll. No. 186). Cat. No. 250393, one specimen (Coll. No. 1266). Cat. No. 250403*a*, one specimen (Coll. No. 1276). Cat. No. 252279, 25 specimens (Coll. No. 1588). In addition to these we have seen 15 specimens in Colonel Turton's collection (Coll. No. 1587), and 87 specimens in the same collection (Coll. No. 1588).

*ALVANIA FENESTRATA* Krauss.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 186818, five specimens (Coll. No. 184). Cat. No. 252278, 25 specimens (Coll. No. 1588). In addition to that we have seen 111 specimens which have been returned to Colonel Turton (Coll. No. 1587).

*ALVANIA IMA*, new species.

Plate 5, fig. 2.

Shell small, ovate, yellowish white. Nuclear whorls two, well rounded, smooth. Postnuclear whorls slightly rounded, marked by very regular, feeble, protractive axial ribs which are a little wider than the spaces that separate them. Of these ribs, 26 occur upon the first, 30 upon the second, and 32 upon the penultimate whorl. In addition to the ribs, the whorls are marked by a slender spiral cord at the summit, which renders the summit decidedly crenulated. A second spiral cord marks the periphery of the turns; the intercostal spaces between these spiral cords are wedge-shaped, the angle of the wedge being at the summit. Base somewhat inflated, well rounded, marked on the posterior two-thirds by six strongly incised spiral grooves, which make the spaces between them appear as broad, low rounded keels. Sutures strongly impressed. Aperture irregularly oval; outer lip moderately thick, showing the external sculpture within; inner lip almost straight, oblique; parietal wall covered with a thick callus.



The type, Cat. No. 187669, U.S.N.M., comes from Port Alfred (Coll. No. 607). It has almost four postnuclear whorls and measures: Length, 2.3 mm.; diameter, 1.5 mm. Cat. No. 249704 U.S.N.M., contains another specimen from Port Alfred (Coll. No. 976).

Genus *RISSOINA* Orbigny.

*RISSOINA ALFREDI* Smith.

Cat. No. 186816, U.S.N.M., two specimens from Port Alfred (Coll. No. 182).

*RISSOINA CALIA*, new species.

Plate 5, fig. 1.

Shell elongate-conic, bluish white. Nuclear whorls decollated. Postnuclear whorls moderately rounded, strongly appressed at the summit, which lends them a somewhat curved outline near the summit; marked with numerous, very regular, slender, flexuous axial ribs, of which 26 occur upon the first, 32 upon the second, 36 upon the third and fourth, 40 upon the fifth, and 46 upon the penultimate turn. The moderately impressed spaces enclosed between these ribs are about as wide as the ribs, and are crossed by slender spiral threads, of which about 13 occur between the sutures. The spaces enclosed between the spiral threads and the axial ribs are a little wider than the spiral threads and appear as well-impressed pits. Periphery of the last whorl well rounded. Base somewhat prolonged, well rounded, marked by the continuations of the axial ribs, which become somewhat enfeebled anteriorly and 16 spiral threads; the latter are a little more accentuated on the anterior portion than they are upon the spire. Aperture irregularly ovate, somewhat channeled anteriorly; posterior angle acute; outer lip moderately thick, showing the external sculpture within; inner lip scarcely differentiated from the body whorl, to which it is appressed; parietal wall covered with a thin callus.

The type, and four specimens, Cat. No. 186817, U.S.N.M., come from Port Alfred (Coll. No. 183). The type has seven postnuclear whorls, which measure: Length, 6.7 mm.; diameter, 2.2 mm. Cat. No. 227738, U.S.N.M., contains 10 specimens from the same locality (Coll. No. 833), and Cat. No. 227739, contains six specimens from the same source (Coll. No. 834).

Cat. No. 249707a, U.S.N.M., contains a badly worn specimen (Coll. No. 979).

*RISSOINA*, species?

Cat. No. 249696, U.S.N.M., contains a badly worn specimen of a small species from Port Alfred, having closely spaced, decidedly protractive ribs and without spiral sculpture. It is too badly worn to serve for a proper diagnosis (Coll. No. 968).

## RISSOINA EUCOSMIA, new species.

Plate 20, fig. 2.

Shell small, falcate, semitranslucent. Nuclear whorls a little more than one, smooth, well rounded. Postnuclear whorls high between the sutures, strongly shouldered at the summit, marked on the anterior half by strong, comma-shaped axial ribs, which are truncated posteriorly, tapering gently anteriorly and are lost before they reach the middle of the whorl. Of these ribs, 12 occur upon the first, 14 upon the second, 16 upon the third, and 18 upon the fourth and penultimate turn. In addition to these axial ribs the whorls are marked between the sutures by a smooth spiral cord, the posterior border of which marks the space between the sutures on the later turns. Sutures strongly channeled. Periphery of the last whorl marked by a strong spiral cord. Base moderately long, marked by two, equal and equally spaced, spiral cords, of which the last encircles the insertion of the columella. Aperture oval; outer lip thick, with a brown band immediately posterior to the spiral keel; inner lip very thick and appressed to the attenuated base; parietal wall covered by a moderately thick callus which renders the peritreme complete.

The type, Cat. No. 250395, U.S.N.M., comes from Port Alfred (Coll. No. 1268). It has five and a half postnuclear whorls, and measures: Length, 2.8 mm.; diameter, 1.1 mm.

## RISSOINA, species?

Cat. No. 250372, U.S.N.M., contains the tips of two Rissoinas, from Port Alfred, too young to be determined (Coll. No. 1245).

Cat. No. 250400, U.S.N.M., contains a *Rissoina* from Port Alfred, which is different from any of the known species, but too poor to serve for a diagnosis (Coll. No. 1273).

## RISSOINA (PHOSINELLA) PURA Gould.

Plate 5, fig. 10.

*Alvania pura* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 402, 1861.

Shell elongate-conic, white. Nuclear whorls two, well rounded, smooth. Postnuclear whorls well rounded, marked by almost vertical narrow axial ribs which are about one-half as wide as the spaces that separate them. Of these ribs 12 occur upon the first, 18 upon the second to fourth, 20 upon the fifth, 22 upon the sixth, and 26 upon the penultimate whorl. In addition to the axial ribs the whorls are marked by equal and equally spaced spiral cords which are almost as strong on the ribs, the junctions of the two forming strong, rounded tubercles. Of these cords, 2 occur upon the first, 3 upon the second to fourth, and 5 upon the remaining turns. The spaces

enclosed by the ribs and cords are deep rectangular pits, having their long axis parallel with the spiral sculpture. Periphery well rounded. Base moderately protracted, marked by the continuations of the axial ribs which become much enfeebled as they approach the columella, and six spiral cords, of which the posterior two are of the strength and spacing of those on the spire, while the other four are separated from these two by a space about one and one-half times as wide as the spaces between the cords on the spire, and are much closer approximated to each other than the rest. These four are successively weaker from the posterior to the anterior, the latter becoming quite feeble. Aperture irregularly oval, oblique, partly channeled anteriorly; posterior angle obtuse; outer lip reenforced by a heavy callus; parietal wall covered by a thick callus.

Doctor Gould's type, Cat. No. 157, U.S.N.M., was collected by William Stimpson, on the North Pacific Exploring Expedition, in Simons Bay. It has eight postnuclear whorls, and measures: Length, 5.8 mm.; diameter, 2.1 mm.

Genus *MICROSETIA* Monterosato.

*MICROSETIA CONSPECTA* Smith.

Cat. No. 186821, U.S.N.M., one specimen from Port Alfred (Coll. No. 187).

*MICROSETIA GISNA*, new species.

Plate 6, fig. 4.

Shell small, ovate, light golden brown, excepting the extreme anterior portion of the base and the peristome, which are yellowish white. Nuclear whorls one and one-half, inflated, smooth, giving the shell a blunt apex. Postnuclear whorls moderately rounded, feebly shouldered at the summit, marked by fine incremental lines only. Sutures moderately impressed. Periphery of the last whorl somewhat inflated, well rounded. Base moderately long, well rounded, narrowly umbilicated, marked like the spire. Aperture ovate; posterior angle acute; outer lip thin at the edge; inner lip strongly curved and partly reflected over the umbilicus; parietal wall covered with a thin callus.

The type, Cat. No. 187055, U.S.N.M., comes from Port Alfred (Coll. No. 593). It has almost four postnuclear whorls, and measures: Length, 2 mm.; diameter, 1 mm.

*MICROSETIA HALIA*, new species.

Plate 6, fig. 8.

Shell small, broadly ovate, light brown. Nuclear whorls not differentiated from the postnuclear turns. Postnuclear whorls well rounded, appressed at the summit, through which the preceding whorl can be seen, which lends the shell the appearance of having a rather broad brown band at the summit; surface of the shell marked by

numerous, decidedly retractive, incremental lines and exceedingly fine spiral striations. Sutures moderately impressed; periphery of the last whorl inflated, well rounded; base short, narrowly umbilicated, well rounded. Aperture subcircular; posterior angle obtuse; outer lip thin; inner lip strongly curved and partly reflected over the umbilicus, continuing as a thin callus over the parietal wall.

The type and seven specimens, Cat. No. 187072, U.S.N.M., came from Port Alfred (Coll. No. 610). The type has a little more than five whorls, and measures: Length, 2.1 mm.; diameter, 1.1 mm. Cat. No. 227745, U.S.N.M., contains three specimens from the same locality (Coll. No. 840). Another specimen, Cat. No. 250428, U.S.N.M., also comes from Port Alfred (Coll. No. 1301).

**MICROSETIA HELGA, new species.**

Plate 6, fig. 3.

Shell small, elongate-conic, yellowish white. Nuclear whorls not differentiated from the succeeding turns; all the whorls well rounded, appressed at the summit, through which the preceding whorl shines, which lends the shell the aspect of having a double suture. Sutures moderately impressed. Periphery of the last whorl somewhat inflated, well rounded. Base moderately long, narrowly umbilicated, well rounded; entire surface of spire and base marked by exceedingly fine incremental lines only. Aperture oval; posterior angle obtuse; outer lip thick; inner lip strongly curved and quite thick, reflected over the umbilicus; parietal wall covered with a thick callus.

The type and another specimen, Cat. No. 187056, U.S.N.M., came from Port Alfred (Coll. No. 594). The type has six whorls and measures: Length, 2.7 mm.; diameter, 1.5 mm. Cat. No. 250423, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1296).

**MICROSETIA IRMA, new species.**

Plate 21, fig. 9.

Shell elongate-ovate, very thin, transparent. Nuclear whorls not differentiated from the postnuclear turns. Postnuclear whorls well rounded, appressed at the summit, marked by exceedingly fine, retractive lines of growth and closely spaced, microscopic spiral striations. Sutures moderately constricted. Periphery of the last whorl strongly rounded. Base moderately long, strongly rounded, very narrowly umbilicated. Aperture ovate; posterior angle acute; outer lip very thin; inner lip very thin, evenly curved and slightly reflected; parietal wall glazed with a thin callus.

The type and another specimen, Cat. No. 249724, U.S.N.M., come from Port Alfred (Coll. No. 996). The type has four whorls, and measures: Length, 1.6 mm.; diameter, .1 mm.

Genus *BARLEEIA* Clark.*BARLEEIA SMITHI*, new species.

Plate 10, fig. 5.

Shell broadly ovate, light chestnut brown, with the parietal wall and the inner edge of the columella dark chestnut. Nuclear whorls not differentiated from the rest of the shell. Postnuclear whorls rounded, marked by decidedly retractive lines of growth and exceedingly fine, closely spaced, microscopic spiral striations. Sutures strongly constricted. Periphery of the last whorl inflated, strongly rounded. Base short, strongly rounded, umbilicated, marked like the spire. Aperture subcircular; outer lip thin; columella moderately thick, slightly reflected; parietal wall covered by a thick callus, which renders the peritreme complete.

The type and three other specimens, Cat. No. 227741, U.S.N.M., come from Port Alfred (Coll. No. 836). The type has four whorls and measures: Length, 1.5 mm.; diameter, 0.9 mm.

Genus *FENELLA* A. Adams.*FENELLA ALMO*, new species.

Plate 31, fig. 4.

Shell elongate-conic, milk white, rather thick. Nuclear whorls smooth, well rounded. Postnuclear whorls well rounded, marked by a strong, median, spiral keel and another a little less strong at the periphery. These keels become more strongly developed on the last turn than on the preceding turns. In addition to these, there are numerous, very fine, spiral threads between the keels and also upon them, which are crossed by equally fine axial threads, lending the entire surface a finely reticulated appearance. There are also a few irregularly disposed, low, ill-defined axial riblets, which are best shown on the last half of the last whorl. Base well rounded, ornamented like the spire. Aperture thin within, provided with a complete peristome at the edge, which is greatly thickened and built out, and slightly reflected all around.

The type, Cat. No. 249708, U.S.N.M., comes from Port Alfred (Coll. No. 980). It measures: Length, 7.1 mm.; diameter, 2.6 mm.

Family *JEFFREYSIIDAE*.Genus *JEFFREYSIA* Alder.*JEFFREYSIA CAFFRA* Sowerby.

Cat. No. 186822, U.S.N.M. Three specimens from Port Alfred (Coll. No. 188). Cat. No. 249721, U.S.N.M., contains two specimens from the same locality (Coll. No. 993).



*JEFFREYSIA CAPENSIS* Sowerby.

Seven lots of this species are in the collection of the United States National Museum, all from Port Alfred. Cat. No. 187059, six specimens (Coll. No. 597). Cat. No. 187068, one specimen (Coll. No. 606). Cat. No. 186812*a*, one specimen (Coll. No. 178*a*). Cat. No. 187063*a*, two specimens (Coll. No. 601). Cat. No. 250431, two specimens (Coll. No. 1304). Cat. No. 249723, one specimen (Coll. No. 995). In addition to these we have seen 67 specimens in Colonel Turton's collection. (Coll. No. 1592).

## Family ASSIMINEIDAE.

## Genus ASSIMINEA Leach.

*ASSIMINEA OVATA* Krauss.

Three lots of this species are in the collection of the United States National Museum, from Port Alfred, Cat. No. 186814*b*, one specimen (Coll. No. 180). Cat. No. 227735, three specimens (Coll. No. 830). Cat. 249728, two specimens (Coll. No. 1000).

*ASSIMINEA UMLAASIANA* Smith.

The United States National Museum contains three lots of this species from Port Alfred. Cat. No. 186814, three specimens (Coll. No. 180). Cat. No. 186815, six specimens (Coll. No. 181). Cat. No. 227734, eight specimens (Coll. No. 829). In addition to these I have seen 78 specimens from Port Alfred which have been returned to Colonel Turton (Coll. No. 1596).

*ASSIMINEA CAPENSIS*, new species.

Plate 6, fig. 9.

Shell broadly conic, thick, light brown. Nuclear whorls not differentiated from the postnuclear turns. Postnuclear whorls well rounded, feebly shouldered at the summit, marked by decidedly retractive lines of growth and exceedingly fine spiral striations. Sutures moderately constricted. Periphery of the last whorl strongly inflated, obscurely angulate. Base short, well rounded, marked like the spire. Aperture very large, irregularly ovate; posterior angle acute; outer lip thick within, thin at the edge; inner lip thick, appressed, strongly curved, continuous with the thick parietal callus.

The type, Cat. No. 186814*a*, U.S.N.M., comes from Port Alfred (Coll. No. 180). It has six whorls, and measures: Length, 6 mm.; diameter, 3.5 mm. Cat. No. 227824 U.S.N.M., contains two specimens from the same locality (Coll. No. 829*a*). Another specimen, Cat. No. 250414, U.S.N.M., is from the same locality (Coll. No. 1287).

## ASSIMINEA FASCIATA Krauss.

Cat. No. 187051, U.S.N.M. Five specimens from Port Alfred (Coll. No. 589). Cat. No. 227736, U.S.N.M., four young specimens from the same locality (Coll. No. 831). Cat. No. 227737, U.S.N.M., three very young individuals from the same source (Coll. No. 832).

## ASSIMINEA, species?

Cat. No. 250421, U.S.N.M., contains a worn specimen which we are unable to identify, from Port Alfred (Coll. No. 1294).

## Family CALYPTRAEIDAE.

## Genus TROCHITA Schumacher.

## TROCHITA HELICOIDEA Sowerby.

Cat. No. 186827, U.S.N.M., one specimen from Port Alfred (Coll. No. 193).

## TROCHITA SINENSIS Linnaeus.

Cat. No. 36, U.S.N.M., one specimen, collected by William Stimpson, on the North Pacific Exploring Expedition, at False Bay, Cape of Good Hope. Cat. No. 139, U.S.N.M., five specimens collected by William Stimpson, on the North Pacific Exploring Expedition, in 20 fathoms, on sandy bottom at False Bay, Cape of Good Hope. Cat. No. 186828, two specimens from Port Alfred (Coll. No. 194).

## TROCHITA CALYPTRAEFORMIS Lamarck.

Cat. No. 89868, U.S.N.M., two specimens from the Cape of Good Hope.

## Genus CREPIDULA Lamarck.

## CREPIDULA ACULEATA Gmelin.

Cat. No. 98023, U.S.N.M., five specimens from Albany. Cat. No. 186825, U.S.N.M., three specimens from Port Alfred (Coll. No. 191). Cat. No. 19175, U.S.N.M., two specimens from the Cape of Good Hope.

## CREPIDULA HEPATICA Deshayes.

Cat. No. 89869, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 19169, U.S.N.M., three specimens from the Cape of Good Hope. Cat. No. 43146, U.S.N.M., five specimens from the Cape of Good Hope. Cat. No. 98052, U.S.N.M., seven specimens from Albany. Cat. No. 186826, U.S.N.M., two specimens from Port Alfred (Coll. No. 192). Cat. No. 249788, U.S.N.M., contains three specimens from the same locality (Coll. No. 1060). Cat. No. 249787, U.S.N.M., four specimens from the same place (Coll. No. 1059).

## CREPIDULA HEPATICA COMPLANATA Krauss.

Cat. No. 187131, U.S.N.M., two specimens from Port Alfred (Coll. No. 677). Cat. No. 250576, U.S.N.M., another specimen from the same source (Coll. No. 1449).

*CREPIDULA LENTIGINOSA* Sowerby.

Cat. No. 98051, U.S.N.M., three specimens from Albany. Cat. No. 19173, U.S.N.M., one specimen from Port Elizabeth. Cat. No. 186826*a*, U.S.N.M., one specimen from Port Alfred (Coll. No. 192). Cat. No. 249786, U.S.N.M., four specimens from the same locality (Coll. No. 1058).

## Family LAMELLARIIDAE.

## Genus LAMELLARIA Montagu.

*LAMELLARIA PERSPICUA* Linnaeus.

One specimen, Cat. No. 250530, U.S.N.M., from Port Alfred (Coll. No. 1403). Cat. No. 250532, U.S.N.M., one young specimen from the same place (Coll. No. 1405). Cat. No. 249768, U.S.N.M., three young specimens from the same locality (Coll. 1040).

## Family NATICIDAE.

## Genus NATICA Scopoli.

*NATICA IMPERFORATA* Gray.

Cat. No. 98024, U.S.N.M., twelve specimens from Kassouga, Albany. Cat. No. 21800, U.S.N.M., one specimen from Algoa Bay. Cat. No. 186829, U.S.N.M., three specimens from Port Alfred (Coll. No. 195).

*NATICA STIMPSONI*, new species.

Plate 13, figs. 5, 8, 11.

Shell large, subglobose, imperforate, bluish white, speckled with numerous dots of brown over the entire surface, excepting a narrow band on the shoulder of the whorls and another a little anterior to the periphery, which are marked by a series of quite regularly spaced triangles, the apexes of which point forward. The whorls are inflated, slopingly shouldered at the summit, the rest well rounded, marked by numerous strong lines of growth, and fine spiral lirations. Periphery and base of the last whorl well rounded, marked like the spire. Aperture large, oval; outer lip thin; inner lip thick, curved and strongly reflected over the umbilical area; parietal wall covered with a very thick callus, having a notch a little nearer the posterior angle of the aperture than its junction with the inner lip.

The type, Cat. No. 93, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. It has five and one-half whorls, and measures: Length, 38.5 mm.; diameter, 36 mm.

*NATICA*, species ?

Cat. No. 187082, U.S.N.M., three poor specimens from Port Alfred which I am unable to refer to any known form (Coll. No. 624). Cat. No. 249750, U.S.N.M., contains two additional specimens, in an equally poor condition, from the same place (Coll. No. 1022).

**NATICA ALFREDENSIS**, new species.

Plate 13, figs. 4, 7, 10.

Shell of medium size, irregularly ovate, early whorls bluish, later ones light buff, marked with a series of retractively sloping streaks of brown near the summit, and numerous small dots of brown. The callus and columellar area are white. Early whorls well rounded, the later ones a little less so. The last whorl is strongly appressed at the summit, which lends it a somewhat pinched-in appearance immediately below the summit. Periphery and base of the last whorl well rounded. Aperture oval; outer lip thin, purplish brown deep within, white at the edge; inner lip strongly curved; parietal wall covered with a very thick callus, which is entire.

The type and two specimens of this species, Cat. No. 187085, U.S.N.M., come from Port Alfred (Coll. No. 627). The type has four and one-half whorls, and measures: Length, 17 mm.; diameter, 14.5 mm. Three additional lots are in the collection of the United States National Museum from the same locality. Cat. No. 249752, three specimens (Coll. No. 1024). Cat. No. 249754, two specimens (Coll. No. 1026). Cat. No. 249748, three specimens (Coll. No. 1020.)

**NATICA FORATA** Reeve.

Cat. No. 17096, U.S.N.M., one specimen from Cape of Good Hope. Cat. No. 43134, U.S.N.M., eight specimens from the same place. Cat. No. 46445a, U.S.N.M., one specimen from the same locality. Cat. No. 186830, U.S.N.M., four specimens from Port Alfred (Coll. No. 196).

**NATICA AFRICANA**, new species.

Plate 13, figs. 13, 14, 15.

Shell similar to *N. forata*, but decidedly elevated, and with a much narrower umbilicus. The coloration is as follows: ground color pearl gray; a narrow band, of short, axially disposed streaks of light brown, is situated at the summit; while five, equal and equally spaced, narrow bands encircle the whorls; the first of these is a little farther from the brown band at the summit than from its neighbor anteriorly. These bands are composed of narrow, arrow-shaped elements, which are white, tipped with brown, and are arranged in cone-in-cone series, pointing forward. In addition to these bands, the whorls are marked by alternating lines of light and darker color, which coincide with the lines of growth. The umbilical area and the region adjacent to it, as well as the thin callus, are white, the whorls are well rounded, smooth. Umbilicus narrowly funnel-shaped; umbilical wall provided with two spiral keels. Aperture oval, dark purple within, thin and white at the edge; inner lip curved and very slightly reflected; parietal wall covered with a thin callus.

The type and another specimen of this species, Cat. No. 46445, U.S.N.M., come from the Cape of Good Hope. The type has four and one-half whorls, and measures: Length, 11.3 mm.; diameter, 11 mm. Cat. No. 249753, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1025).

*NATICA NAPUS* Smith.

Cat. No. 186832, U.S.N.M., contains one specimen from Port Alfred (Coll. No. 198).

*NATICA DECIPIENS* Smith.

Cat. No. 186831, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 197).

*NATICA QUEKETTI* Sowerby.

Cat. No. 46445*b*, U.S.N.M., one specimen from the Cape of Good Hope.

*NATICA*, species?

Cat. No. 187084, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 626), which we are unable to refer to any of the known species, but they are too worn to permit a proper diagnosis. Cat. No. 250485, U.S.N.M., contains one specimen from the same locality in an equally poor condition (Coll. No. 1358). Cat. No. 249751, U.S.N.M., another specimen also in poor condition (Coll. No. 1023).

*NATICA NEMO*, new species.

Plate 13, figs. 6, 9, 12.

Shell subglobose, narrowly umbilicated, moderately elevated, uniformly cream colored. Nuclear whorls two and one-third, moderately well rounded, smooth. Postnuclear whorls well rounded, marked by numerous, very decided notchings, which are strongest near the summit, weakening gradually as they pass over the whorls; on the early whorls they extend to the suture. Suture feebly impressed. Periphery of the last whorl well rounded. Base well rounded, narrowly umbilicated. The periphery and the base are marked by the feeble continuations of the impressed lines. The umbilicus is almost closed by a strong, spiral callus, which occupies the middle of the umbilical wall. The callus on the parietal wall is interrupted at the posterior termination of the spiral umbilical callus where a deep notch is present; outer lip thin at the edge, colored very light brown within.

The type has three postnuclear whorls, and the whole shell measures: Length, 14.2 mm.; diameter, 13.8 mm. It comes from Port Alfred, and is Cat. No. 187083, U.S.N.M. (Coll. No. 625).



## NATICA SALDONTIANA, new species.

Plate 13, figs. 1, 2, 3.

Shell small, subglobose, with well-elevated spire. Early whorls badly eroded in our specimens, those remaining, well rounded, marked with strong, retractive lines of growth, which are strongest near the summit, weakening somewhat as they pass over the body of the whorls. Periphery and base of the last whorl well rounded, the latter very narrowly umbilicated. Aperture oval, bluish white within; outer lip thin; inner lip thin, strongly curved and very slightly reflected; parietal wall covered with a thick callus, which extends down to the inner lip and practically covers up the umbilicus, forming a rounded patch over it. The general coloration of the shell is bluish gray, with numerous fine, brown, wavy lines, which coincide in a general way with the lines of growth. There is a tendency on the part of these lines to become consolidated into brown spots at the summit, particularly on the last portion of the last whorl.

The type and another specimen, Cat. No. 163024, U.S.N.M., were dredged in 27 fathoms in Saldontia Bay. The type has four and one half whorls and measures: Length, 14.2 mm.; diameter, 13.6 mm. This shell comes nearest to *Natica nemo* Bartsch, but has a more elevated spire and has the parietal callus extending down over the umbilicus; it also lacks the strongly impressed notchings at the summit.

## NATICA, species?

Cat. No. 187081, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 623), which appear to belong to a new species. The color markings of these shells are so badly faded that we refrain from describing the specimens. Cat. No. 249749, U.S.N.M., two equally poor specimens from Port Alfred (Coll. No. 1021).

Cat. No. 250484, U.S.N.M., contains a large, low, broad *Natica*, with a dark umbilical callus, which is too poor to be identified, from Port Alfred (Coll. No. 1357).

Cat. No. 249773, U.S.N.M., contains three nepionic shells of a *Natica*, from Port Alfred (Coll. No. 1045).

## Family VANIKOROIDAE.

## Genus VANIKORO Quoy and Gaimard.

## VANIKORO AFRICANA, new species.

Plate 36, fig. 11.

Shell small, translucent, bluish white. Nuclear whorls one and a half, well rounded, smooth. Postnuclear turns one and a half, well rounded, ornamented with many decidedly retractive axial riblets which are stronger and more distantly spaced on the first turn than

on the succeeding. These riblets are about one-third as wide as the spaces that separate them on the first turn, while on the last turn the intercostal spaces are only a trifle wider than the riblets. The spaces between the riblets are crossed by numerous, very fine spiral striations. Base gradually, deeply umbilicated. The umbilicus marked at its outer edge by a strong carina. The entire surface of the base is marked by the continuation of the axial riblets, which pass undiminished over the base, into the umbilicus. The base appears slightly excavated immediately posterior to this carina. The exterior umbilical wall is concave and marked by the continuation of the axial riblets from aperture; outer lip thickened at the edge; inner lip sinuous, slightly reflected, and continuing over the parietal wall, rendering the peritreme complete.

The type, Cat. No. 249769, U.S.N.M., comes from Port Alfred (Coll. No. 1041). It measures: Altitude, 3 mm. The greatest measurement obtainable while lying on the aperture is 3 mm. Another specimen, Cat. No. 250534, U.S.N.M. (Coll. No. 1407), comes from the same place.

#### Family ACMAEIDAE.

##### Genus ACMAEA Eschscholtz.

##### ACMAEA ROSEORADIATA Smith.

Cat. No. 19319, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 187133, U.S.N.M., two specimens from Port Alfred (Coll. No. 679). Cat. No. 250573, U.S.N.M., contains another specimen from the same locality (Coll. No. 1446).

#### Family PATELLIDAE.

##### Genus PATELLA Linnaeus.

##### PATELLA GRANATINA Linnaeus.

The United States National Museum contains eight lots of this species from the Cape of Good Hope, as follows: Cat. No. 7586, four specimens collected by William Stimpson on the North Pacific Exploring Expedition; Cat. No. 7587, ten specimens; Cat. No. 16615, two specimens; Cat. No. 17347, two specimens; Cat. No. 89797, three specimens; Cat. No. 89798, one specimen; Cat. No. 103886, four specimens; Cat. No. 128388, two specimens. Cat. No. 184355, U.S.N.M., one specimen from Cape Town. Cat. No. 186902, U.S.N.M., one specimen from Port Alfred (Coll. No. 272).

##### PATELLA LONGICOSTA Lamarck.

Cat. No. 109, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. Cat. No. 89835, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 186901, U.S.N.M., three specimens from Port

Alfred (Coll. No. 271). Cat. No. 249785, U.S.N.M., three specimens from the same locality (Coll. No. 1057).

*PATELLA OCULUS* Reeve.

Three lots of this species were collected by William Stimpson on the North Pacific Exploring Expedition. Two of these, Cat. No. 94, U.S.N.M., two specimens, and Cat. No. 609, U.S.N.M., six specimens, came from Simons Bay, Cape of Good Hope. Cat. No. 7584, U.S.N.M., five specimens were collected at Cape of Good Hope. Three additional lots from the Cape of Good Hope are in the collection of the United States National Museum: Cat. No. 17346, two specimens; Cat. No. 89796, two specimens; Cat. No. 120280, one specimen. Cat. No. 22747, U.S.N.M., contains one specimen from Algoa Bay. Cat. No. 125381, U.S.N.M., contains two specimens from Cape Town. Cat. No. 187129, U.S.N.M., one specimen from Port Alfred (Coll. No. 675).

*PATELLA GRANULARIS* Linnaeus.

Cat. No. 194, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 16616, U.S.N.M., five specimens from the Cape of Good Hope. Cat. No. 89836, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 125396, U.S.N.M., five specimens from Cape Town. Four additional lots are in the collection of the United States National Museum, from Port Alfred: Cat. No. 186898, three specimens (Coll. No. 268); Cat. No. 249899, two specimens (Coll. No. 1171); Cat. No. 250565, two specimens (Coll. No. 1438); Cat. No. 250567, one specimen (Coll. No. 1440). Cat. No. 253738, U.S.N.M., three specimens from Algoa Bay.

*PATELLA BARBARA* Linnaeus.

The United States National Museum contains eight lots from the Cape of Good Hope, as follows: Cat. No. 16614, four specimens; Cat. No. 32002, two specimens; Cat. No. 32015, three specimens; Cat. No. 89837, one specimen; Cat. No. 89838, one specimen; Cat. No. 128382, one specimen. Cat. No. 125375, U.S.N.M., contains five specimens from Cape Town. Cat. No. 98055, U.S.N.M., four specimens from Albany. In addition to these the United States National Museum contains 11 lots from Port Alfred, as follows: Cat. No. 186896, one specimen (Coll. No. 266); Cat. No. 186900, three specimens (Coll. No. 270); Cat. No. 187128, two specimens (Coll. No. 674); Cat. No. 187130, seven specimens (Coll. No. 676); Cat. No. 187132, two specimens (Coll. No. 678); Cat. No. 227793, four specimens (Coll. No. 888); Cat. No. 227794, four specimens (Coll. No. 889); Cat. No. 249897, one specimen (Coll. No. 1169); Cat. No. 249898, two specimens (Coll. No. 1170); Cat. No. 250564, one specimen (Coll. No. 1437); Cat. No. 250562, five young specimens (Coll. No. 1435).

*PATELLA CONSPICUA* Philippi.

Cat. No. 17345, U.S.N.M., four specimens from the Cape of Good Hope. Cat. No. 36643, U.S.N.M., two specimens from South Africa without specific locality. Cat. No. 249896, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 1168).

*PATELLA ARGENVILLEI* Krauss.

Cat. No. 125367, U.S.N.M., three specimens collected by the United States Eclipse Expedition at Cape Town. Cat. No. 186899, U.S.N.M., two specimens from Port Alfred (Coll. No. 269). Cat. No. 227795, U.S.N.M., four young specimens of this species from the same locality (Coll. No. 890).

*PATELLA VARIABILIS* Krauss.

Cat. No. 17351, U.S.N.M., one specimen from the Cape of Good Hope. In addition to this, the United States National Museum contains four lots from Port Alfred, as follows: Cat. No. 186895, two specimens (Coll. No. 265); Cat. No. 187130*a*, one specimen (Coll. No. 676*a*); Cat. No. 227788, four specimens (Coll. No. 883); Cat. No. 227789, four specimens (Coll. No. 884). In addition to these, we have seen two lots in Colonel Turton's collection, 20 specimens, Coll. No. 1609, and ten specimens, Coll. No. 1610.

*PATELLA COMPRESSA* Lamarck.

Cat. No. 17349, U.S.N.M., three specimens from the Cape of Good Hope. Cat. No. 36646, U.S.N.M., three specimens collected by William Stimpson on the North Pacific Exploring Expedition, at the Cape of Good Hope. Cat. No. 128374, U.S.N.M., four specimens from the Cape of Good Hope. Cat. No. 249784, U.S.N.M., contains three young specimens from Port Alfred (Coll. No. 1056).

*PATELLA MINIATA* Born.

Cat. No. 32014, U.S.N.M., five specimens from the Cape of Good Hope. Cat. No. 90620, U.S.N.M., two specimens from the same place. Cat. No. 128380, U.S.N.M., two specimens from the same locality. In addition to these, the United States National Museum contains four lots from Port Alfred; Cat. No. 186897, four specimens (Coll. No. 267); Cat. No. 227790, six specimens (Coll. No. 885); Cat. No. 227791, six specimens (Coll. No. 886); Cat. No. 249783, two specimens (Coll. No. 1055). Cat. No. 253740, U.S.N.M., are specimens from Tafalbi, South Africa.

*PATELLA COCHLEAR* Born.

Cat. No. 17344, U.S.N.M., six specimens from the Cape of Good Hope. Cat. No. 90621, U.S.N.M., one specimen from the same place. In addition to these, the United States National Museum contains four lots from Port Alfred, as follows: Cat. No. 186903, one specimen

(Coll. No. 273); Cat. No. 249900, two specimens (Coll. No. 1172); Cat. No. 249901, two specimens (Coll. No. 1173); Cat. No. 249902, two specimens (Coll. No. 1174).

*PATELLA CAPENSIS* Dunker.

Cat. No. 32000, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 89839, U.S.N.M., three specimens from the same place. In addition to these, the United States National Museum has three lots from Port Alfred, as follows: Cat. No. 249782, one specimen (Coll. No. 1054); Cat. No. 250563, one specimen (Coll. No. 1436); Cat. No. 250568, another specimen (Coll. No. 1441).

*PATELLA DUNKERI* Krauss.

Cat. No. 105*b*, U.S.N.M., four specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. Cat. No. 125374, U.S.N.M., one specimen from Cape Town. Cat. No. 186895*a*, U.S.N.M., one specimen from Port Alfred (Coll. No. 265*a*). Cat. No. 227792, U.S.N.M., two specimens from the same locality (Coll. No. 887).

*PATELLA PRUINOSA* Krauss.

Cat. No. 14, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. Cat. No. 17352, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 186904, U.S.N.M., three specimens from Port Alfred (Coll. No. 274). Cat. No. 250566, U.S.N.M., contains a young specimen of this species (Coll. No. 1439).

Genus *HELCION* Montfort.

*HELCION PECTINATUS* Linnaeus.

Cat. No. 188, U.S.N.M., six specimens collected by William Stimpson on the North Pacific Exploring Expedition at False Bay, Cape of Good Hope. Cat. No. 18790, U.S.N.M., one specimen from Port Elizabeth. Cat. No. 21823, U.S.N.M., one specimen from Algoa Bay. In addition to these, the United States National Museum contains five lots from the Cape of Good Hope, as follows: Cat. No. 32008, one specimen; Cat. No. 89843, three specimens; Cat. No. 89844, one specimen; Cat. No. 120239, one specimen; Cat. No. 128378, one specimen. Cat. No. 186905, U.S.N.M., one specimen from Port Alfred (Coll. No. 275).

Family PHASIANELLIDAE.

Genus PHASIANELLA Lamarek.

*PHASIANELLA KOCHII* Philippi.

Cat. No. 18793, U.S.N.M., twelve specimens from Port Elizabeth. Cat. No. 43122, U.S.N.M., twenty-six specimens from Cape of Good



Hope. Cat. No. 97997, U.S.N.M., seven specimens from Knysna, South Africa. Cat. No. 98015, U.S.N.M., thirty-seven specimens from Kleinemonnd, South Africa. Cat. No. 186868, U.S.N.M., four specimens from Port Alfred (Coll. No. 238). Cat. No. 187093, U.S.N.M., three specimens from the same locality (Coll. No. 637). Cat. No. 250505, U.S.N.M., seventeen specimens from the same place (Coll. No. 1378). Cat. No. 272128, U.S.N.M., two specimens from South Africa. Cat. No. 272944, U.S.N.M., three specimens from Port Natal.

*PHASIANELLA ELONGATA* Krauss.

Cat. No. 186867, U.S.N.M., five specimens from Port Alfred (Coll. No. 237). Cat. No. 187094, U.S.N.M., one specimen from the same locality (Coll. No. 638).

*PHASIANELLA CAPENSIS* Dunker.

Cat. No. 169, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition, at Simons Bay, Cape of Good Hope. Cat. No. 43122a, U.S.N.M., six specimens from the Cape of Good Hope. Cat. No. 89237, U.S.N.M., eight specimens from the Cape of Good Hope.

*PHASIANELLA AFRICANA*, new species.

Plate 10, fig. 2.

Shell small, very elongate-conic; ground color yellowish, upon which are superimposed numerous irregular blotches and flammulations of varying shades of brown, which usually are preceded by a white patch. Frequently there is a row of distantly spaced, light blue dots near the suture. Nuclear whorls two, well rounded, forming a depressed, flattened apex. Postnuclear whorls well rounded, appressed at the summit, and marked by exceedingly fine lines of growth only. Periphery of last whorl rounded. Base rather short, well rounded. Aperture almost circular; outer lip thin, showing the exterior markings within; inner lip well curved and slightly reflected over the base; parietal wall covered with a thin callus.

The type and two specimens, Cat. No. 186870, U.S.N.M., come from Port Alfred (Coll. No. 240). The type has three and one-half post nuclear whorls and measures: Length, 3.5 mm.; diameter, 2.7 mm.

Related to *Phasianella capensis*, but at once distinguished from it by its minute size.

Three additional lots from Port Alfred are in the collection of the United States National Museum, Cat. No. 250506, three specimens (Coll. No. 1379); Cat. No. 250507, one specimen (Coll. No. 1380); Cat. No. 249774, three specimens (Coll. No. 1046).

*PHASIANELLA BICARINATA* Dunker.

Cat. No. 186869, U.S.N.M., three specimens from Port Alfred (Coll. No. 239).

## PHASIANELLA NERITINA Dunker.

Cat. No. 19034, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 31693, U.S.N.M., one specimen from the same locality. Cat. No. 125382, U.S.N.M., three specimens from Cape Town.

## Family TURBINIDAE.

## Genus TURBO Linnaeus.

## TURBO SARMATICUS Linnaeus.

Cat. No. 96, U.S.N.M., eight specimens collected by William Stimpson under and above stones, at Simons Bay, Cape of Good Hope, on the North Pacific Exploring Expedition. Cat. No. 101, U.S.N.M., one specimen, obtained at the same place by the same collector. Cat. No. 18357, U.S.N.M., four specimens collected at the Cape of Good Hope by the Exploring Expedition. Cat. No. 89946, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 98010, U.S.N.M., seven specimens from Kasouga, South Africa. Cat. No. 186864, U.S.N.M., one specimen from Port Alfred (Coll. No. 234).

## TURBO CIDARIS Gmelin.

Cat. No. 251, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. Cat. No. 18792, U.S.N.M., one specimen from Port Elizabeth.

Cat. No. 250495a, U.S.N.M., one specimen from Port Alfred (Coll. No. 1368).

## TURBO NATALENSIS Krauss.

Cat. No. 98007, U.S.N.M., five specimens from the Peddie Coast, South Africa. Cat. No. 186863, U.S.N.M., one specimen from Port Alfred (Coll. No. 233).

Cat. No. 250495, U.S.N.M., two specimens from the same locality (Coll. No. 1368).

## TURBO CORONATUS Gmelin.

Cat. No. 98006, U.S.N.M., four specimens from Kaffraria, South Africa.

## Genus ASTRAEA Bolten.

## ASTRAEA TAYLORIANA Smith.

Cat. No. 186862, U.S.N.M., one specimen from Port Alfred (Coll. No. 232).

## Genus LEPTOTHYRA Dall.

## LEPTOTHYRA SPURIA Gould.

Plate 22, figs. 4, 5, 6.

*Monilea spuria* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 17, 1861.

Shell broadly depressed, conic, yellowish-white. Nuclear whorls two, the first smooth, the second marked by many fine raised axial

threads which are about as wide as the spaces that separate them. Postnuclear whorls marked by four, strong, broad, rounded, spiral cords of which the first is at the summit, while the second is a little nearer the first than it is to the third, the fourth, marking the periphery, is about as far from the third as that is from the second. On the last turn two additional slender spiral threads make their appearance, one immediately anterior to the second, the other, anterior to the third heavy spiral cord. The cords are marked quite regularly by weak tubercles which are about as long as they are broad and are separated from each other by a space about two-thirds as wide as a tubercle. Sutures deeply channelled. Periphery of the last whorl well rounded. Base short, well rounded, marked by seven strong rounded spiral cords which increase in size from the periphery to the columellar chink. The spaces separating the cords are deep sulci narrower than the cords. The entire surface is marked by closely spaced, very slender, wavy, axial threads. Aperture very oblique, small, outer lip bending strongly anteriorly to join the columella, thin at the edge, where it is rendered wavy by the sculpture, but very thick a little behind the edge; columella short, decidedly revolute; parietal wall covered with a thick callus which completes the peritreme.

Cat. No. 24269, U.S.N.M., contains Gould's cotypes, three specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. We have figured the largest of these, which has two and one-fourth postnuclear whorls, and measures: Altitude, 5.5 mm.; greater diameter, 6.5 mm.; lesser diameter, 6.0 mm.

**LEPTOTHYRA AFRICANA, new species.**

Plate 22, figs. 1, 2, 3.

Shell with moderately elevated spire. Nuclear whorls white, the rest marked with irregular axial bands of white and reddish brown. Nuclear whorls two, apparently smooth. Postnuclear whorls marked with three strong spiral cords between the sutures; the first of which is a little below the summit, while the third is a little posterior to the periphery, the second being midway between them. The sulci between the cords are almost two times as wide as the cords. On the last whorl an additional cord appears between the first and second and second and third. In each case this anterior cord is greater than the primary ones and a little nearer to the one posterior than to its anterior neighbor. In addition to the spiral sculpture, the whorls are marked by numerous, fine, retractive, axial threads. Sutures strongly impressed. Periphery of the last whorl marked by a strong spiral cord. Base short, well rounded, marked with four strong, spiral cords which equal the peripheral one in strength and a tumid

area which extends over the anterior third of the base. The sulci separating the cords on the base are about as wide as the cords. The sulcus immediately anterior to the peripheral cord carries a slender thread equal to the posterior cord on the spire. Aperture sub-circular; outer lip thick within, thinning to the somewhat sinuous edge; inner lip very strongly curved and slightly reflected over the base; parietal wall covered with a thick callus. In addition to the spiral sculpture the base is marked by the continuation of the fine axial threads.

Young specimens are very broadly umbilicated. In the adult, however, the last whorl bends in and completely covers the umbilicus. The type and three specimens of this species, Cat. No. 186866, U.S.N.M., come from Port Alfred (Coll. No. 236). The type, an adult specimen, having two and one-fourth postnuclear whorls, measures: Altitude, 5.2 mm.; greater diameter, 7.2 mm.

LEPTOTHYRA QUANTILLA Gould.

Plate 23, figs. 4, 5, 6.

*Collonia quantilla* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 22, 1861.

Shell small, apex wax yellow, the rest bright red, excepting the umbilical area of the base, which is white. Nuclear whorls well rounded, smooth. Postnuclear whorls marked by strong, rounded, spiral cords which are a little wider than the spaces that separate them; of these cords four occur upon the first and second; five upon the third, and six upon the last turn. The axial sculpture of the spire consists of fine incremental lines only. Sutures channelled. Periphery of the last whorl well rounded. Base short, well rounded, narrowly, openly umbilicated, marked by 15 low, well rounded, spiral cords which are about twice as broad as the spaces that separate them, and fine incremental lines. Aperture very oblique, subcircular; outer lip thin at the edge but very much thickened immediately behind this; columella very thick and strongly curved; parietal wall covered with a thick callus.

Cat. No. 135, U.S.N.M., Gould's type, was collected by William Stimpson on the North Pacific Exploring Expedition at Simon's Bay, Cape of Good Hope. It has almost three postnuclear whorls and measures: Altitude, 2 mm.; greater diameter, 2.8 mm.; lesser diameter, 2.3 mm. Two additional lots from Port Alfred are in the collection of the U.S.N.M., Cat. No. 186865*a*, one specimen (Coll. No. 235*a*) and Cat. No. 249770 (Coll. No. 1042).

LEPTOTHYRA CARMINEA, new species.

Plate 23, figs. 7, 8, 9.

Shell small, bright carmine red except the nuclear whorls, which are white. Nuclear whorls two and one-fourth, smooth, separated



by a scarcely perceptible suture, forming a depressed apex. Post-nuclear whorls well rounded, the first ornamented with three spiral cords which are about one-third as wide as the spaces that separate them and which divide the spaces between the sutures into four equal portions. On the last turn the spiral cords have increased to six which are equal and almost equally spaced. In addition to the spiral sculpture, the whorls are marked by numerous, feeble, decidedly retractive lines of growth. Sutures strongly impressed. Periphery of the last whorl well rounded. Base short, well rounded, narrowly umbilicated, marked by six spiral cords which equal those on the spire in strength with the exception of the anterior one which is much weaker than the rest. Aperture oval; outer lip very thick showing the exterior marking within by transparent light. Inner lip exceedingly thick, decidedly curved, partly reflected over and appressed to the base.

The type and another specimen of this species Cat. No. 186865, U.S.N.M., come from Port Alfred (Coll. No. 235). The type has two postnuclear whorls, and measures: Altitude, 2.4 mm.; greater diameter, 3.3 mm.

This species recalls *Leptothyra sanguinea* Linnaeus, and may be what has been reported from South Africa under this name. It differs from *sanguinea* by having the nuclear whorls white and in being umbilicated in the adult stage, also in detail of sculpture, but most conspicuously by its minute size. Cat. No. 272266, U.S.N.M., contains eight specimens from Algoa Bay.

LEPTOTHYRA ALFREDENSIS, new species.

Plate 32, figs. 1, 2, 3.

Shell creamy yellow. The sculpture of the nuclear whorls is worn too badly to be determined. That of the first postnuclear turn consists of a very slender thread at the appressed summit, and three strong spiral keels, of which one is at the periphery, another about one-third of the distance between the summit and the suture, anterior to the summit, while the median one is a little nearer to the peripheral keel than the one below the summit. In addition to these strong spiral cords, the whorls are marked by fine, raised, spiral threads, of which eight occur on the concave shoulder between the summit and the strong keel below it, and five between the first keel and the median, and three between the median and the peripheral. In the latter case the middle one is fully twice as strong as the two slender threads bordering it. The base of the last whorl is marked by three strong spiral keels which divide the space between the peripheral keel and the umbilical region into four equal broad grooves, which are also marked with fine spiral threads, two occurring on the first and second below the periphery, and five between the second and



last. The open umbilicus is likewise marked with slender spiral threads. In addition to the spiral sculpture, the entire surface of the shell is marked by numerous, retractively slanting, slender, raised, axial threads, which are almost lamellar and are about one-fourth as wide as the spaces that separate them; of these, about 65 occur on the last turn. These threads run up on the sides of the strong spiral keels, and may pass over them; in our specimen the keels are too worn to determine this point. The axial sculpture is equally strong on the spire and the base and even bends into the umbilicus. Aperture very oblique, subcircular; outer lip rendered angulated by the spiral cords; inner lip strongly curved and slightly reflected.

The type, Cat. No. 250500, U.S.N.M., comes from Port Alfred (Coll. No. 1373). It has four whorls, and measures: Altitude, 4.7 mm.; greater diameter, 4.8 mm.

### Family TROCHIDAE.

#### Genus CLANCULUS Montfort.

##### CLANCULUS MINIATUS Anton.

Cat. No. 134, U.S.N.M., contains one specimen collected by William Stimpson on the North Pacific Exploring Expedition, at Simons Bay, Cape of Good Hope. Cat. No. 18753, U.S.N.M., five specimens from Cape of Good Hope. Cat. No. 43096, U.S.N.M., four specimens from the Cape of Good Hope. Cat. No. 186871, U.S.N.M., eight specimens from Port Alfred (Coll. No. 241). Cat. No. 187104, U.S.N.M., one specimen from the same locality (Coll. No. 649).

##### CLANCULUS ALFREDENSIS, new species.

Plate 23, figs. 10, 11, 12.

Shell broadly conic, rose colored, obscurely clouded with brown. The first turn of the nucleus is strongly rounded and smooth, the next is marked by three strong, spiral keels which divide the spaces between the sutures into four equal parts. On the next whorl a fourth keel makes its appearance between the summit and the first keel anterior to it. On this whorl, the lines of growth assume the form of slender threads. The post-nuclear whorls are marked by two strong angles, one of which is at the periphery and the other half-way between this and the summit. Each of these angles bears a strong tuberculated cord. Between the median angle and the summit of the whorls two tuberculated spiral cords occur upon the first turn, three on the second, and four upon the last, the cord at the summit having the strongest tubercles in each instance. Between the peripheral cord and the median there is a faint thread upon the first whorl, three nodulous cords on the second, of which the median is the strongest, and five on the last. All of these cords are

tuberculated. In addition to the above sculpture, the entire surface of the post-nuclear whorls is marked by very many, narrow, lamellar, axial threads, which pass over the grooves between the spiral cords and also the tubercles of the ridges. Sutures moderately impressed. Periphery rendered feebly angulated by a spiral cord. Base short, deeply and broadly umbilicated, marked with eight equal and equally spaced, strong, nodulous spiral cords and an equal number of weak nodulous spiral threads which occur half-way between the strong cords. One of these slender threads also occurs between the strong peripheral cord and the first basal. In addition to the above, the entire surface is marked by the continuations of the slender lamellar riblets. No ribs are apparent within the umbilicus. Aperture rhomboidal; outer lip rendered sinuous by the external sculpture, which is also true of the basal lip; inner lip oblique, straight; parietal wall not covered with a callus.

The type, Cat. No. 186871*a*, U.S.N.M., comes from Port Alfred (Coll. No. 241*a*). The type has a little more than two and one-half post-nuclear whorls, and measures: Altitude, 7.2 mm.; greater diameter, 8.7 mm.

*CLANCULUS WALTONAE* Sowerby.

Cat. No. 187105, U.S.N.M., one specimen from Port Alfred (Coll. No. 650). Cat. No. 227779, U.S.N.M., one specimen from the same locality (Coll. No. 874).

*CLANCULUS MERULOIDES* Krauss.

Cat. No. 18680, U.S.N.M., one specimen from Cape of Good Hope.

Genus *OXYSTELE* Philippi.

*OXYSTELE MERULA* Lamarck.

Cat. No. 104, U.S.N.M., three specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. Cat. No. 36801, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 90152, U.S.N.M., two specimens from the same locality. Cat. No. 98008, U.S.N.M., three specimens from the Peddie coast, South Africa. Cat. No. 186881, U.S.N.M., three specimens from Port Alfred (Coll. No. 251).

*OXYSTELE TIGRINA* Anton.

Cat. No. 98, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. Cat. No. 104*a*, U.S.N.M., six specimens collected by the same party at the same place. Cat. No. 98022, U.S.N.M., seven specimens from Peddie and Albany, South Africa. Cat. No. 186880, U.S.N.M., three specimens from Port Alfred (Coll. No. 250).

Cat. No. 250491, U.S.N.M., three young specimens from the same locality (Coll. No. 1364).

## OXYSTELE SAGITTIFERA Lamarck.

The young of this species are exceedingly interesting and might lead one to consider them a *Gibbula*. I append a description.

Shells very small, remarkably colored; lines of connected dots of red radiate from the summit of the turns, curving decidedly protractively down to the periphery. These are separated by bands of pale blue which are about as wide as the red bands. In some specimens the blue is replaced by olive. The under side is dotted with the same reddish brown spots at irregular intervals upon a light-olive ground. Nuclear whorls one and one-half, well rounded, smooth. Post-nuclear turns well rounded, slightly impressed at the summit to render the suture weakly channeled; marked with fine, depressed, slightly rounded, spiral threads, of which 17 occur between the periphery and the summit on the last turn. These threads are separated by mere incised lines. The rest of the sculpture on the spire consists of very fine lines of growth. Periphery of the last whorl obtusely angulated. Base short, openly umbilicated, marked like the spire with slender, low, rounded threads, of which 12 occur between the edge of the umbilicus and the periphery. The umbilicus appears to be devoid of spiral sculpture, being marked only by the little coarser lines of growth. Aperture very large; outer lip thin; inner lip curved and slightly reflected.

The specimen described has three post-nuclear whorls, and measures: Altitude, 1.8 mm.; greater diameter, 2.5 mm.

Cat. No. 96, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. Cat. No. 113, U.S.N.M., fourteen specimens collected by the same party at Cape of Good Hope. Cat. No. 89241, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 98009a, U.S.N.M., one specimen from Kassouga, South Africa. Cat. No. 98018, U.S.N.M., three specimens from the Peddie coast. Cat. No. 98019, U.S.N.M., seven specimens from the same locality. Cat. No. 98020, U.S.N.M., three specimens from the same place. Cat. No. 98021, U.S.N.M., three specimens from the Peddie coast. Cat. No. 98259, U.S.N.M., five specimens from the Cape of Good Hope. Cat. No. 125373, U.S.N.M., three specimens from Cape Town. Cat. No. 131106, U.S.N.M., one specimen labeled: "South Africa," without specific locality. Nine lots of this species, all from Port Alfred, are in the collection of the United States National Museum: Cat. No. 186873, four specimens (Coll. No. 248); Cat. No. 187107, two specimens (Coll. No. 652); Cat. No. 187108, one specimen (Coll. No. 653); Cat. No. 187113, one young specimen (Coll. No. 659); Cat. No. 249772, three young specimens (Coll. No. 1044); Cat. No. 250488, eight specimens (Coll. No. 1361); Cat. No. 250489, four

specimens (Coll. No. 1362); Cat. No. 250490, four specimens (Coll. No. 1363); Cat. No. 250492, four young specimens (Coll. No. 1365); Cat. No. 250493, one specimen (Coll. No. 1366); Cat. No. 250494, one specimen (Coll. No. 1367); Cat. No. 250496, four young specimens (Coll. No. 1369).

OXYTELE TABULARIS Krauss.

Cat. No. 113a, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. Cat. No. 31697, U.S.N.M., five specimens from the Cape of Good Hope. Cat. No. 98009, U.S.N.M., five specimens from Kassouga, South Africa. Cat. No. 186879, U.S.N.M., three specimens from Port Alfred (Coll. No. 249).

Genus UMBONIUM Link.

UMBONIUM VESTIARIUM Linnaeus.

Cat. No. 59857, U.S.N.M., contains twelve specimens from the Cape of Good Hope.

Genus GIBBULA Risso.

GIBBULA LOCULOSA Gould.

Plate 23, figs. 1, 2, 3.

*Gibbula loculosa* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 21, 1861.

Shell helicoid, light brown, with three large white spots between the suture and the periphery of each whorl, dividing the whorl into equal areas. There are also small spots darker than the general coloration which are especially apparent on the strong spiral cords which they divide into equal alternating light and dark areas. These small markings give the base a checker-board appearance. Nuclear whorls small, well rounded, the first smooth, the second provided with four feeble spiral threads. Postnuclear whorls marked by strong sublamellar spiral keels, of which four occur upon the first, and five upon the second. On the next turn an intercalated cord occurs between all the strong keels excepting the space between the third and fourth which has two. On the last turn two cords occur between the first and second keels, one between the second and third, three between the third and fourth and fourth and fifth. In addition to the spiral sculpture the whorls are marked on the spire by numerous closely spaced, decidedly retractorily slanting, thin, lamellar, axial riblets. Suture strongly impressed. Periphery rendered strongly angulated by a spiral keel, between which and the first suprapерipheral keel two slender cords are presented. Base well rounded, narrowly umbilicated, marked by a series of more or less regularly alternating strong and less strong spiral cords of which there are twenty-



six in all. Aperture subcircular, outer lip thin, showing the external sculpture within, somewhat wavy at the edge; columella short, stout, strongly curved; parietal wall covered with a thin callus.

There are two cotypes, Cat. No. 221, U.S.N.M., collected by William Stimpson on the North Pacific Exploring Expedition at False Bay, Cape of Good Hope. The larger of them, the specimen figured, has four postnuclear whorls, and measures: Altitude, 7.2 mm.; greater diameter, 8.5 mm.; lesser diameter, 7.5 mm. Cat. No. 101, U.S.N.M., contains one specimen also collected by William Stimpson at the Cape of Good Hope. Cat. No. 90108b, U.S.N.M., one specimen from the Cape of Good Hope.

*GIBBULA FULGENS* Gould.

Plate 26, figs. 4, 5, 6.

*Gibbula fulgens* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 21, 1861.

Shell helicoid with rather elevated spire, light brown with blotches of dark brown and yellowish-white, these usually on and near the spiral cords, a pearly luster shining through the thin epidermis, particularly in the lighter areas. Nuclear whorls two and one-half, well rounded, smooth, white. Postnuclear whorls ornamented by spiral cords of which three strong ones and two slender ones occur between the summit and the periphery on the first two whorls. The first strong cord is at the summit, the second, half way between the first and third, while the third is as far posterior to the suture as the second is removed from the first. The stronger of the two fine cords is half way between the first and second strong cords and the lesser, half way between this and the one at the summit. On the last turn a third slender cord occurs between the first and second strong cords, dividing the space between the medium slender cord and the second strong cord into equal portions; another slender cord divides the space between the second and third strong cords medially. Sutures strongly impressed. Periphery of the last whorl angulated. Base well rounded, narrowly umbilicated, marked by 10 strong spiral cords, which are almost equal and equally spaced, becoming successively only a trifle less strong and more approximated to each other from the periphery toward the umbilicus. Aperture subcircular, very oblique; outer lip thin at the edge, thick within; columella strong, decidedly curved; parietal wall covered with a thin callus.

The type, Cat. No. 2046, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope; it has three and one-fourth postnuclear whorls, and measures: Altitude, 8 mm.; greater diameter, 7.5 mm.; lesser diameter, 7 mm.



## GIBBULA ARTICULATA Gould.

Plate 25, figs. 4, 5, 6.

*Margarita articulata* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 15, 1861.

Shell horn colored with spots of brown, which equally divide the space with ground color on the spiral keels. There is a line of comma-shaped spots which extend from the summit into the flat space anterior to it. Nuclear whorls two and one-half, small, well rounded, smooth, white. Postnuclear whorls three and one-third, the first two marked by three strong lamellar spiral keels, the last by four between the summit and the periphery. The keels are equally spaced, the fourth being at the periphery, while the first is a little further from the summit than it is from its neighbor anteriorly. In addition to the spiral sculpture, the whorls are marked by very slender, closely spaced, axial threads which are best developed in the spaces between the spiral cords. Periphery and base well rounded, the latter broadly umbilicated and marked by 10 depressed spiral cords which are truncated posteriorly and slope gently anteriorly, the whole having the appearance of a series of imbricating bands. In addition to these, there are three cords in the umbilicus wider and stronger than those on the base. These cords are crossed by closely spaced riblets which give them a peculiarly notched appearance. Aperture subcircular; outer lip rendered sinuous by the spiral keels; columella slender, strongly curved; parietal wall covered with a thin callus.

Gould's type, Cat. No. 121, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. It has  $3\frac{1}{2}$  postnuclear whorls and measures: Altitude, 6 mm.; greater diameter, 7 mm.; lesser diameter, 6 mm. Two additional lots are in the United States National Museum. Cat. No. 90108, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 187106, U.S.N.M., one specimen from Port Alfred (Coll. No. 651).

## GIBBULA FUCATA Gould.

Plate 27, figs. 4, 5, 6.

*Gibbula fucata* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 20, 1861.

Shell elevated, helicoid, apex red, the rest variously spotted, streaked and blotched with Indian red, pale yellow, light green and brown. Nuclear whorls two and one-half, well rounded, smooth. Postnuclear whorls marked by four, very strong, rounded, equal, and equally spaced, spiral cords, of which the first is at the summit and the fourth at the periphery. On the last turn the cord at the summit becomes obsolete. In addition to the spiral sculpture the whorls are marked by very retractorily slanting, closely spaced lines of growth. Periphery of the last whorl rendered decidedly angulated by the spiral cord. Base short, well rounded, marked on the posterior fourth

by six, narrow, flattened, spiral bands and between these and the umbilical chink by seven additional bands of about double the width of the former. Umbilicus covered with a white callus. Aperture subcircular, very oblique; outer lip thin at the edge, thick within; columella strong and decidedly curved; parietal wall covered by a moderately thick callus.

Gould's cotypes, Cat. No. 2047, U.S.N.M., two specimens, were collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. The largest of these two specimens has two and one-eighth postnuclear whorls, and measures: Altitude, 5.6 mm.; greater diameter, 7.3 mm.; lesser diameter, 6 mm. Cat. No. 186876, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 246).

GIBBULA CICER Menke.

Plate 30, figs. 8, 9, 10.

Cat. No. 144, U.S.N.M., Gould's cotypes, eleven specimens of *Gibbula musiva*, a synonym of the above species, one of which is figured. Cat. No. 150, U.S.N.M., seven specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 222, U.S.N.M., three specimens collected by the same at False Bay. Cat. No. 43098, U.S.N.M., eight specimens from the Cape of Good Hope. Cat. No. 43122b, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 98260, U.S.N.M., two specimens from Cape of Good Hope. Cat. No. 186877, U.S.N.M., three specimens from Port Alfred (Coll. No. 247). Cat. No. 250499, U.S.N.M., contains another specimen from the same locality (Coll. No. 1372). Cat. No. 272127, U.S.N.M., an additional specimen from Natal.

GIBBULA GAUDIOSA Gould.

Plate 28, figs. 1, 2, 3.

*Gibbula gaudiosa* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 21, 1861.

Shell helicoid, moderately elevated, red, with four regularly spaced triangular sectors of greenish yellow, on the last turn and one on the whorl preceding this. The cords of the early turns are of the most intense red, equaling the base in the brilliancy of this color. Nuclear whorls, one and one-half, white. Postnuclear whorls well rounded, the first and second marked by four equal, and equally spaced, strong, spiral keels. On the third, a fine, intercalated thread occurs between the strong cords, while on the last turn the number of fine spiral threads between the strong cords is doubled. In addition to the above sculpture, the spire is marked by rather strong, closely spaced, retractive incremental lines. Sutures strongly impressed. Periphery of the last whorl rendered strongly angulated by the fourth strong spiral cord. Base short, well rounded, marked by 15 almost equal and equally spaced, well-rounded, spiral cords. Aper-

ture subcircular, oblique; outer lip thin at the edge where it is rendered sinuous by the strong spiral cords; columella moderately stout, well curved; parietal wall covered with a thin callus.

Gould's cotypes, two specimens, Cat. No. 222a, U.S.N.M., were collected by William Stimpson on the North Pacific Exploring Expedition at False Bay, Cape of Good Hope. The largest of these, the specimen figured, has almost four postnuclear whorls, and measures: Altitude, 5.6 mm.; greater diameter, 5.7 mm.; lesser diameter, 5 mm. Cat. No. 187110, U.S.N.M., one specimen from Port Alfred (Coll. No. 656).

*GIBBULA THALIA*, new species.

Plate 30, figs. 1, 2, 3.

Shell small, white, flaked with large patches of brown, sprinkled irregularly with blotches of carmine. Nuclear whorls two and one-half, well rounded, smooth. Postnuclear whorls strongly rounded, marked with five strong, equal, spiral keels between the sutures, of which the first is at the summit, while the last forms the peripheral keel. The spaces between the spiral keels are a little wider than the keels. In addition to the spiral sculpture the whorls are marked by very numerous, decidedly retractive, axial threads. Sutures strongly impressed. Base moderately long, well rounded, strongly, openly umbilicated, marked by nine, equal and equally spaced, depressed spiral cords, which are almost double the width of the spaces that separate them. In addition to these spiral cords the base is marked by the continuations of the axial threads. Inside of umbilicus smooth. Aperture subcircular, oblique; outer lip rendered decidedly sinuous at the edge by the external sculpture; inner lip strongly curved and slightly reflected.

The type, Cat. No. 187112, U.S.N.M., comes from Port Alfred (Coll. No. 658). It has three postnuclear whorls, and measures: Altitude, 4.5 mm.; greater diameter, 5.5 mm.

*GIBBULA HERA*, new species.

Plate 26, figs. 1, 2, 3.

Shell subglobose, very dark brown, mottled and streaked with yellow horn color. Nuclear whorls two and one-half, well rounded, smooth. Postnuclear whorls well rounded, decidedly shouldered at the summit, marked between this and the suture by broad, depressed, spiral cords, of which five occur upon the first, six upon the second, while the last whorl has eight, owing to splitting of the primary cords. The spaces that separate the cords are less than one-half the width of the cords and are very feebly impressed. In addition to the above sculpture the spire is marked with feeble, decidedly retractive lines of growth which pass over the cords and grooves. Periphery of the last whorl subangulated, marked by a slender spiral cord.

Base moderately long, well rounded, and openly, broadly umbilicated, marked by 13 subequal and subequally spaced spiral threads which are wider than the spaces that separate them. In addition to the spiral cords, the base is marked by the continuation of the lines of growth. Inside of umbilicus smooth. Aperture large, subquadrate; outer and basal lips thin, forming a decided angle at their junction; inner lips oblique, smooth, sinuous; parietal wall glazed with a thin callus.

The type and two specimens of the species, Cat. No. 90108a, U.S.N.M., come from the Cape of Good Hope. The type has three and one-fourth postnuclear whorls, and measures: Altitude, 7 mm.; greater diameter, 8 mm.

**GIBBULA MULTICOLOR** Krauss.

Cat. No. 186874, U.S.N.M., three specimens from Port Alfred (Coll. No. 244). Cat. No. 250508, U.S.N.M., one specimen from Port Alfred (Coll. No. 1381).

**GIBBULA BENZI** Krauss.

Cat. No. 221a, U.S.N.M., two specimens collected by William Stimpson on the North Pacific Exploring Expedition, at False Bay, Cape of Good Hope. Cat. No. 186875, U.S.N.M., four specimens from Port Alfred (Coll. No. 245). Cat. No. 186876a, U.S.N.M., one specimen from the same locality (Coll. No. 246a).

**GIBBULA CAPENSIS** Gmelin.

Cat. No. 98261, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 253737, U.S.N.M., one specimen from the same locality.

**GIBBULA AGLAIA**, new species.

Plate 27, figs. 1, 2, 3.

Shell depressed, conic, of yellowish white ground color, profusely spotted and dashed with red. A series of large interrupted blotches form a chain on the shoulder while the spiral cords are marked by equally spaced, comma-shaped markings. On the peripheral cord is another series of regularly spaced blotches, while one of the cords of the base is marked at regular intervals with dots of red. Nuclear whorls two, depressed helicoid. Postnuclear whorls well rounded, appressed at the summit, marked between the sutures by three feebly developed spiral cords which appear truncated posteriorly and slope gently anteriorly to the next cord, giving the whorl the effect of being wrapped by three turns of a bandage. The space between the posterior edge of the first band and the summit is a little wider than the other threespaces, which are equal. Suture moderately impressed. Periphery of the last whorl rendered somewhat angular by the spiral cord. Base broadly, openly umbilicated, marked with six spiral



bands which have the same arrangement as the spiral sculpture on the spire. The umbilicus is without any sculpture. Entire surface of spire and base marked by exceedingly fine lines of growth which are decidedly retractorily slanted on the spire. Aperture subquadrate, decidedly oblique; outer and basal lips forming an obtuse angle at their junction; inner lip thick, decidedly sinuous; parietal wall glazed with a thin callus.

The type, Cat. No. 102730, U.S.N.M., comes from the Cape of Good Hope. It has four postnuclear whorls, and measures: Altitude, 6 mm.; greater diameter, 6.4 mm. Cat. No. 43011a, U.S.N.M., contains one specimen from the Cape of Good Hope.

**GIBBULA MEDUSA, new species.**

Plate 29, figs. 7, 8, 9.

Shell depressed conic. Nuclear whorls white. Postnuclear whorls marked with broad axial bands of brown which may extend entirely across the whorls, or may be interrupted in the middle. These bands of brown are separated by spaces of a light sage green, which are about as wide as the brown bands on the posterior half of the whorls between the sutures; the green area fading to yellow anteriorly. These light areas are speckled with small dots of chestnut and clouded in places with pale brown. The base is pale green, profusely spotted with dots and blotches of red. Nuclear whorls two and a quarter, depressed helicoid. Postnuclear whorls evenly rounded, marked with two, broad, spiral bands, which extend over the anterior half of the whorls between the sutures, where they appear as two turns of a bandage. The periphery of the last whorl is marked by a moderately strong spiral keel which renders it angulated. Sutures feebly constricted. Base short, well rounded, broadly umbilicated; marked by seven broad low bands which grow successively wider from the umbilical edge toward the periphery. These bands appear as a series of turns of a bandage. Umbilicus without any spiral sculpture. The entire surface of spire and base is marked with faint retractive lines of growth. Aperture very oblique, oval; outer and basal lips thin, showing the external markings within; inner lip quite thick, evenly curved; parietal wall glazed with a very thin callus.

The type and two specimens of this species, Cat. No. 43011, U.S.N.M., come from the Cape of Good Hope. The type has two and one-half postnuclear whorls, and measures: Altitude, 3.5 mm.; greater diameter, 5 mm.

**GIBBULA TRYONI Pilsbry.**

Cat. No. 186873, U.S.N.M., three specimens from Port Alfred (Coll. No. 243).



## GIBBULA PINTADO Gould.

Plate 28, figs. 10, 11, 12.

*Margarita pintado* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 16, 1861.

Shell helicoid, moderately elevated, wax yellow ground color, marked with elongate brown spots on the spiral keels, which are equal to the intervening light areas that separate them in length. Color pattern of base similar to that of the spire. Nuclear whorls one and one-half, well rounded, smooth. Postnuclear whorls strongly rounded, marked by seven well rounded, equally developed and equally spaced, spiral cords on all the turns between the summit and the periphery. Suture feebly impressed. Periphery of the last whorl well rounded. Base moderately long, well rounded and narrowly umbilicated, marked by 15 almost equal and equally spaced spiral cords; in the spaces between several of these a fine, spiral line is apparent. Umbilicus without spiral sculpture. The entire surface is marked with very slender, decidedly, retractively, slanting, regularly spaced axial threads. Aperture oblique, subquadrate; outer lip thin, rendered wavy on the edge by the external sculpture; columella stout, very oblique, almost straight; parietal-wall covered with a thin callus.

Gould's type, Cat. No. 213, U.S.N.M., was dredged by William Stimpson on North Pacific Exploring Expedition, in 12 fathoms, on sand bottom, in Simons Bay, Cape of Good Hope. It has  $3\frac{1}{2}$  post-nuclear whorls, and measures: Altitude, 4.5 mm.; greater diameter, 5.6 mm.; lesser diameter, 5.1 mm.

## GIBBULA ZONATA Wood.

Cat. No. 123, U.S.N.M., three specimens collected by William Stimpson on the North Pacific Exploring Expedition in Simons Bay, Cape of Good Hope. Cat. No. 18697, U.S.N.M., three specimens from the Cape of Good Hope. Cat. No. 42887, U.S.N.M., six specimens from the same place. Cat. No. 90127, U.S.N.M., seven specimens from the same locality. Cat. No. 250497, U.S.N.M., two young specimens from Port Alfred (Coll. No. 1370). Cat. No. 250528, two young specimens from the same locality (Coll. No. 1401). Cat. No. 272126, U.S.N.M., two from the Cape of Good Hope.

## GIBBULA RIFACA, new species.

Plate 32, figs. 4, 5, 6.

Shell sublenticular, wax colored, with irregular blotchings and spottings of very pale chestnut brown; upper surface depressed, helicoid. The nucleus consists of a little more than one whorl, which is well rounded and smooth. Postnuclear turns marked by strongly incised spiral lines, causing the space between them to appear as raised, well

rounded spiral cords on the first two postnuclear whorls and as broad flattened cords on the last turn. Eight of these spiral cords appear on the first, seven on the second, while on the last turn 12, including the peripheral cord, appear between the periphery and the summit, those nearest the periphery on this whorl being much narrower than on the posterior portion of the whorl. Sutures well marked. Periphery of the last whorl very strongly angulated. Base very short, slightly concave, broadly, openly umbilicated, marked by 12 depressed, rounded spiral cords of somewhat varying width. The entire surface of the shell is marked by slender lines of growth which extend over the base and into the umbilicus. Aperture very oblique, large; outer lip thin, showing the external sculpture within; inner lip almost vertical, sinuous, reflected over and appressed to the preceding whorl.

The type and another specimen, Cat. No. 187111, U.S.N.M., come from Port Alfred (Coll. No. 657). The type has three and one-half postnuclear whorls, and measures: Altitude, 3.5 mm.; greater diameter, 5 mm.

Genus *SOLARIELLA* Wood.

*SOLARIELLA FUSCOMACULATA* Smith.

Cat. No. 187099, U.S.N.M., two specimens from Port Alfred (Coll. No. 643).

*SOLARIELLA*, species ?

Cat. No. 187100, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 644), which belong to this genus, but which are too worn to be properly identified. Cat. No. 250525, U.S.N.M., contains two additional specimens of this species, but also too worn to serve for diagnosis (Coll. No. 1398), from Port Alfred.

Genus *CALLIOSTOMA* Swainson.

*CALLIOSTOMA EUCOSMIA*, new species.

Plate 25, figs. 1, 2, 3.

Shell broadly conic, of wax ground-color, variously mottled and clouded with patches of white and brown; on the spire there is also a narrow purple band which extends over the periphery and a little posterior to it on the early whorls. On the base, particularly on the area adjacent to the umbilical region, brown flakes alternating with flakes of white, form a chain-like pattern. Nuclear whorls about one and one-half, well rounded, smooth. Postnuclear whorls moderately rounded, marked with subequal, and subequally spaced, granulose, spiral cords, of which 4 occur upon the first, 5 upon the second, 7 upon the third, 12 upon the fourth, and 23 upon the last whorl between the sutures. These cords are about as wide as the spaces that separate them. The tubercles on them are elongated, their long axes coincid-

ing with the spiral sculpture. In addition to the spiral sculpture the whorls are marked by fine, decidedly retractive lines of growth. Sutures moderately constricted. Periphery of the last whorl strongly angulated, marked by a cord about doubly as wide as those occurring on the spire. Base very short, well rounded, slightly concave at the umbilical area, marked by 20 spiral cords which, on the posterior half, are subequal and subequally spaced, while those on the anterior half are alternately wider and narrower. The spaces between the cords equal the cords in width. Aperture rhomboidal; outer lip thin, showing the external sculpture within by transmitted light; rendered feebly wavy by the external sculpture at the edge, which is also true of the basal lip. The junction of the basal and outer lips forms almost a right angle; columella very oblique, strongly curved and partly reflected over the base as a smooth callus.

The type, Cat. No. 97988, U.S.N.M., and three specimens of this species come from Albany and Peddie, South Africa. The type has six and one-half postnuclear whorls, and measures: Altitude, 20 mm.; greater diameter, 20 mm.

Some of the specimens in our collection are suffused with a purple color. It seems remarkable that this large species should have been overlooked so long. In our collection it has appeared under the names of *Calliostoma rufopunctata*, *ornata*, and *bicingulatum*.

Cat. No. 18711, U.S.N.M., contains three specimens from the Cape of Good Hope. Cat. No. 186872, U.S.N.M., three specimens from Port Alfred (Coll. No. 242). Cat. No. 187102, U.S.N.M., one specimen from Port Alfred (Coll. No. 646). Cat. No. 250516, U.S.N.M., two young specimens from the same locality (Coll. No. 1389).

CALLIOSTOMA AFRICANA, new species.

Plate 24, figs. 2, 4, 6.

Shell regularly conic, flesh colored, with squarish maculations of chestnut brown, the latter occupy a zone extending from the periphery to the middle of the whorl, and are separated from each other by a space about equal to the width of the brown spots. On the base the spiral cords are dotted with maculations of the same color. Nuclear whorls, at least two, apparently smooth. The post-nuclear whorls are marked by spiral cords and axial riblets forming tubercles at their junction, thus lending the spiral cords a granulated appearance. Of these cords, 3 occur upon the first, 4 upon the second, 7 upon the third, 8 upon the fourth, and 10 upon the penultimate turn between the periphery and the summit. These spiral cords are separated on all but the last whorl by spaces about equal to the cords in width. On the last turn, however, the sulci are broader and the tuberculated cords are less regular than on the preceding turns. Sutures slightly constricted. Periphery of the last

whorl decidedly angulated, marked by a broad spiral cord. Base short, slightly rounded, marked by 14 somewhat flattened spiral cords of somewhat irregular width, increasing slightly in width from the periphery to the umbilical area. The spaces that separate them are also of somewhat irregular width, but in general are almost as wide as the cord. In addition to the spiral sculpture, the base is marked by numerous coarse lines of growth which cut the cords but do not render them tuberculated. Aperture subcircular; posterior angle obtuse; outer lip thin; columella strongly curved and reflected over the base as a slight callus at the umbilical area.

The type and two specimens, Cat. No. 249765; U.S.N.M., come from Port Alfred (Coll. No. 1037). The type has a little more than five postnuclear whorls, and measures: Altitude, 12.8 mm.; greater diameter, 12 mm.

Two additional lots are in the collection from Port Alfred, as follows: Cat. No. 187103, U.S.N.M., one specimen (Coll. No. 647); Cat. No. 249764, U.S.N.M., two specimens (Coll. No. 1036). Another specimen comes from Albany or Peddie, South Africa, Cat. No. 97988, U.S.N.M.

This shell resembles in a general way *C. eucosmia*, but differs in being much more narrowly conic, and also in detail of sculpture.

CALLIOSTOMA, species ?

Cat. No. 42845, U.S.N.M., contains two young specimens of a species from the Cape of Good Hope which we are unable to refer to any of the known forms. Cat. No. 97988a, U.S.N.M., a young specimen of the same species from Albany or Peddie, South Africa.

Genus EUCHELUS Philippi.

EUCHELUS NATALENSIS Smith.

Cat. No. 250501, U.S.N.M., two specimens from Port Alfred (Coll. No. 1374).

Genus CYNISCA H. and A. Adams.

CYNISCA FORTICOSTATA Smith.

Cat. No. 186882, U.S.N.M., three specimens from Port Alfred (Coll. No. 252). Cat. No. 227780, U.S.N.M., three specimens from the same locality (Coll. No. 875).

CYNISCA GLORIOSA, new species.

Plate 31, figs. 6, 7, 8.

Shell depressed helicoid, reddish brown excepting the tips of the tubercles, which are lighter, and the apex, which is white. Nuclear whorls, a little more than two, well rounded, smooth, separated by a quite strongly channeled suture. Postnuclear whorls ornamented by strong spiral cords, of which three occur upon the first, the first



and broadest of these being at the summit, the next in strength being a median, while the third is a little less strong and is a little posterior to the periphery. On the second turn the first cord splits, the two elements becoming equal in strength eventually. The spaces which separate the cords are strongly impressed spiral grooves. The axial sculpture consists of rather broad, low ribs, the intersection of which with the spiral sculpture form well marked tubercles. In the broad spiral grooves which separate the spiral cords there appear numerous fine axial threads. Sutures strongly channeled. Periphery of the last whorl marked by a spiral cord a little less strong than the first supraperipheral cord. Base short, broadly, openly umbilicated, well rounded, having six weakly tuberculated spiral cords between the peripheral cord and the umbilicus, the last one marking the edge of the umbilicus. These cords are of equal strength, and are separated by strong sulci almost as wide as the cords, which are crossed by numerous very fine axial threads. There is another spiral cord immediately within the umbilicus. The rest of the umbilicus is marked by fine axial threads only. Aperture oblique, subcylindric; posterior angle obtuse; outer lip rendered sinuous by the external sculpture; inner lip very thick, almost straight on the outer edge, the inner strongly curved; parietal wall glazed with a thick callus.

The type and another specimen, Cat. No. 250515, U.S.N.M., come from Port Alfred (Coll. No. 1388). The type has a little more than one and one-half whorls, and measures: Altitude, 5.5 mm.; greater diameter, 7 mm. Cat. No. 250552, U.S.N.M., contains four young specimens of the same species, also from Port Alfred (Coll. No. 1425).

**CYNISCA ALFREDENSIS, new species.**

Plate 29, figs. 10, 11, 12.

Shell depressed helicoid; bluish white, irregularly spotted with dots of carmine red on the upper surface. Nuclear whorls badly worn in all our specimens; the succeeding turns ornamented between the sutures by three strong spiral cords which are feebly tuberculated. The first of these cords is a little anterior to the summit, the space between the summit and the cord being almost as wide as the space between the first and median cords. The third cord is quite a bit posterior to the suture. The four sulci separating these three cords are deep and rounded and are crossed by very numerous, very fine, axial threads. Periphery of the last whorl marked by a spiral cord as strong as those between the sutures, which is separated from the first supraperipheral cord by a sulcus almost as wide as those on the spire and like these crossed by numerous fine axial lines. Base moderately rounded, marked with three strong spiral cords, of which the one joining the umbilicus is about twice as wide as the others. The three grooves separating these cords are about as wide as the



posterior two cords on the base. Umbilicus broad and funnel shaped, the umbilical wall being marked by three weak spiral cords. Aperture irregular, ovate; outer and basal lips very thick, rendered sinuous by the external sculpture; inner lip very thick, almost vertical, somewhat curved; parietal wall covered by a moderately thick callus.

The type and another specimen, Cat. No. 187109, U.S.N.M. (Coll. No. 655), come from Port Alfred. The type has four postnuclear whorls, and measures: Altitude, 4.5 mm.; greater diameter, 8 mm.; lesser diameter, 7 mm. Cat. No. 227781, U.S.N.M. (Coll. No. 876), contains three specimens from the same locality. Cat. No. 250513, U.S.N.M., another specimen from the same place (Coll. No. 1386).

**CYNISCA AFRICANA, new species.**

Plate 28, figs. 4, 5, 6.

Shell small, white. Nuclear whorls a little more than two, smooth, well rounded, separated by a well impressed suture. Postnuclear whorls almost two, well rounded, ornamented between the sutures by three strong spiral keels of which the first, which is a little anterior to the summit, is nodulous. The deep grooves separating these strong keels are a little wider than the keels. The axial sculpture is reduced to exceedingly fine retractive lines of growth. Periphery of the last whorl marked by a strong keel which equals the one posterior to it in strength and is separated from this by a sulcus as deep and broad as that which separates the keel posterior to it from its posterior neighbor. Base deeply umbilicated, moderately well rounded, marked by four strong spiral cords of which the last bounds the umbilicus. This and the one next to it are tuberculated, while the two posterior to it are smooth. The deep, broad sulci separating these spiral cords are crossed by fine axial lines of growth. Aperture oblique, oval; outer lip very thick; inner lip thick, decidedly curved; parietal wall covered with a thick callus.

The type and two specimens, Cat. No. 187098, U.S.N.M., come from Port Alfred (Coll. No. 642). The type measures: Altitude, 2 mm.; greater diameter, 2.6 mm. This species resembles *Cynisca forticostata* very much, but is at once distinguished from it by its minute size. Cat. No. 250514, U.S.N.M., one specimen from Port Alfred (Coll. No. 1387).

**Genus TEINOSTOMA H. and A. Adams.**

**TEINOSTOMA AFRICANA Smith.**

Cat. No. 86884, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 254).

**TEINOSTOMA ALFREDENSIS, new species.**

Plate 28, figs. 7, 8, 9.

Shell small, white. Nucleus consisting of a single smooth turn. Postnuclear whorls two and one-third, well rounded, marked by

numerous equal and equally spaced, very fine, spiral striations and equally fine, decidedly, retractively, curved lines of growth, the combination of the two lending the surface a minutely reticulated appearance. Sutures well impressed. Periphery of the last whorl well rounded. Base moderately rounded, depressed at the umbilical area which is covered by a strong callus. The base, excepting the umbilical area, which is smooth, is marked like the upper surface. Aperture exceedingly large, very oblique, subcircular; outer lip thick within, thinning to a sharp edge; inner lip very thick, strongly curved; parietal wall covered with an exceedingly thick callus, which renders the peritreme complete.

The type, Cat. No. 186865a, U.S.N.M., comes from Port Alfred (Coll. No. 235a). It measures: Altitude, 1.1 mm.; greater diameter, 2 mm.

Cat. No. 250537, U.S.N.M., contains another specimen from Port Alfred (Coll. No. 1410).

### Family LIOTIIDAE.

#### Genus ILAIRA A. Adams.

##### ILAIRA FULGENS Gould.

Plate 29, figs. 4, 5, 6.

*Liotia fulgens* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 142, 1859.

Shell planorboid, yellow horn colored, with axial streaks of pale brown, and pearly iridescence shining through here and there. Whorls slightly rounded on the anterior half with a depressed concave area centering on the third, the outer fourth being flat. Entire surface marked by fine lines of growth only. Periphery of the shell with two very strong lamellar keels which inclose a broad deep channel between them. Base with a broad funnel-shaped umbilicus which is limited externally by a strong, well rounded, spiral cord. The space between the basal peripheral keel and the umbilical cord is flat. Aperture rendered pentagonal by the three cords, the posterior angle, and the junction of the basal lip with the columella.

Gould's type, Cat. No. 156, U.S.N.M., was collected by William Stimpson on the North Pacific Exploring Expedition at Simon's Bay, Cape of Good Hope. It has four whorls, and measures: Altitude, 2.2 mm.; greater diameter, 5 mm.; lesser diameter, 4 mm.

Three additional lots of this species are in the collection from Port Alfred: Cat. No. 250535, U.S.N.M., one young specimen (Coll. No. 1408); Cat. No. 250559, U.S.N.M., another young specimen (Coll. No. 1432); Cat. No. 250560, U.S.N.M., also a young specimen (Coll. No. 1433).

#### Genus LIPPISTES Montfort.

##### LIPPISTES GRAYI Adams.

Cat. No. 187148, U.S.N.M., two specimens from Port Alfred (Coll. No. 695).

## Family VITRINELLIDAE.

## Genus VITRINELLA C. B. Adams.

*VITRINELLA RIFACA*, new species.

Plate 37, figs. 1, 2, 3.

Shell small, planorboid, cream yellow. Nuclear whorls two, well rounded, smooth. Postnuclear whorls one and one-fifth, well rounded, marked by lines of growth only. Sutures strongly impressed. Periphery of the last whorl well rounded. Base very broadly umbilicated, showing all the whorls within, the individual whorls well rounded, smooth excepting the lines of growth. Aperture slightly oblique, subcircular, thin at the edge, thickened only at the parietal wall.

The type, Cat. No. 249775, U.S.N.M., comes from Port Alfred (Coll. No. 1047). It measures: Altitude, 0.5 mm.; greater diameter, 1.8 mm.

*VITRINELLA CIFARA*, new species.

Plate 37, figs. 7, 8, 9.

Shell small, depressed helicoid, translucent. Nuclear whorls a little more than two, well rounded, marked by fine lines of growth only. Postnuclear whorls well rounded, marked by strong lines of growth. Suture strongly impressed, almost channeled. Periphery strongly rounded. Base openly umbilicated, showing all the whorls within, which are well rounded and marked by lines of growth only. Aperture oblique, oval; outer lip thin; inner lip strongly curved; parietal wall covered with a thick callus which renders the peritreme complete.

The type, Cat. No. 249767, U.S.N.M., comes from Port Alfred (Coll. No. 1039). It has a little more than one postnuclear turn, and measures: Altitude, 0.5 mm.; greater diameter, 1.4 mm.

This species closely resembles the last, but is much more elevated, less widely umbilicated, and the whorls are bent more downward than in the preceding species.

*VITRINELLA FICARA*, new species.

Plate 34, figs. 1, 2, 3.

Shell rather large, planorboid, yellowish. Nuclear whorls one and one-half, very large, well rounded, smooth. Succeeding turns well rounded, marked by numerous very fine thread-like ribs, the spaces between which are marked by numerous fine spiral striations. Sutures strongly constricted. Periphery strongly rounded. Base openly umbilicated, showing all the whorls within, which are less rounded and marked like the spire. Aperture oblique, subcircular.

The type, Cat. No. 349775a, U.S.N.M., comes from Port Alfred (Coll. No. 1047a). It has a little more than one and one-half post-

nuclear whorls, and measures: Altitude, 1.2 mm.; greater diameter, 3 mm.

*VITRINELLA FACIRA*, new species.

Plate 34, figs. 5, 6, 7.

Shell small, very depressed helicoid, thin, bluish white. The nucleus consists of two stages: In the first, embracing one and one-half turns, the surface is smooth; in the second stage, which embraces a little more than a turn, the surface is marked by numerous, closely spaced, slender, spiral lirations. Postnuclear turns one and one-fourth, appressed at the summit, well rounded, smooth, marked by exceedingly fine lines of growth only. Periphery of the last whorl well rounded. Base openly umbilicated, the umbilicus occupying a little more than one-third of the diameter of the base, showing all the whorls within, which are well rounded and marked by lines of growth only. Aperture subcircular.

The type, Cat. No. 249767*a*, U.S.N.M., comes from Port Alfred (Coll. No. 1039). It measures: Altitude, 0.8 mm.; greater diameter, 2 mm.

*VITRINELLA (DOCOMPHALA) ARIFCA*, new species.

Plate 36, figs. 7, 8, 9.

Shell minute, rather thick, semitranslucent, bluish white. Nuclear whorls one and one-half, well rounded, polished, smooth. Post-nuclear turns one and one-fourth, strongly rounded, marked by two slender spiral cords at the summit and microscopic spiral striations on the rest of the surface. In addition to the spiral sculpture the turns are marked by fine lines of growth. On the outer edge of the aperture a number of strongly incised spiral scratches make their appearance. Sutures well impressed. Periphery of the last whorl well rounded. Base well rounded, strongly umbilicated. The umbilicus is limited exteriorly by a strong, slightly tuberculated, spiral cord. Three additional, strongly tuberculated, spiral cords, which decrease in strength from the outer edge inward, mark the inner wall of the umbilicus. The posterior portion of the base, between the limiting spiral cord of the umbilicus and the periphery, is smooth, while the other half adjoining the spiral cord is marked by decidedly retractorily slanting, oblique, slender, axial ribs which anastomose with the spiral cord limiting the umbilicus. Aperture circular; outer lip very thick; inner lip very strong and reflected, strongly curved within, the outer edge oblique and straight. The posterior angle of the aperture is filled by a strong callus.

The type and another specimen of this species, Cat. No. 250554, U.S.N.M., come from Port Alfred (Coll. No. 1427). The type measures: Altitude, 0.6 mm.; greater diameter, 1.1 mm.



Genus *CYCLOSTREMA* Marryat.*CYCLOSTREMA ALFREDENSIS*, new species.

Plate 35, figs. 6, 7, 8.

Shell small, milk white. Nuclear whorls two and one-half, well rounded, smooth. Post-nuclear whorls marked by four strong spiral keels, of which the first, which is the weakest, is a little anterior to the summit, while the second marks the very strong shoulder, the fourth forming the peripheral keel, and the third being half way between the second and the periphery. In addition to these spiral cords the whorls are marked by decidedly retractively slanting axial riblets, which increase in strength and spacing as the shell progresses in size. About 25 of these occur on the last half of the last turn. These riblets cross the sulci, which are about twice as broad as the spiral cords, but do not seem to pass over the spiral cords. Periphery rendered angulated by the peripheral cord. Base well rounded, marked by three spiral cords, of which, the third and strongest bounds the moderately large umbilicus; the other two divide the space between this and the peripheral cord into three equal parts. The deep sulci are marked by the continuation of the axial riblets. Aperture oblique, subcircular; outer lip rendered decidedly sinuous at the margin by the external sculpture, which is also apparent through the substance of the shell; inner lip oblique, slightly curved and slightly reflected.

The type, Cat. No. 250501a, U.S.N.M., comes from Port Alfred (Coll. No. 1374). It has one and one-fifth postnuclear whorls, and measures: Altitude, 1.2 mm.; greater diameter, 1.7 mm.

Genus *CYCLOSTREMELLA* Bush.*CYCLOSTREMELLA FARICA*, new species.

Plate 32, figs. 7, 8, 9.

Shell small, depressed helicoid, very thin, translucent, bluish white. Nuclear whorls a little more than one, well rounded, smooth. The first half postnuclear whorl is ornamented with a strong keel a little anterior to the summit and another a little posterior to the periphery; the spaces between the keel and the summit, and between the keels are finely striated. These striations become stronger and the keels less pronounced after passing the first half turn, until on the final whorl the shell is marked with numerous equal and equally spaced fine spiral lirations, of which the first two near the summit are a little weaker than the rest and give this narrow portion almost the appearance of a smooth band. About 40 of these lirations occur between the summit and the periphery. Sutures well impressed. Periphery well rounded. Base strongly rounded, with a broad umbilicus which extends over half of the diameter of the base. The outer limit of the umbilicus is marked by a strong spiral cord; another



equally strong is about as far within the umbilicus as it is separated from the first of the five additional spiral cords which mark the inner umbilical wall. The space between the outer limiting cord and the periphery is marked by fine spiral lirations, equaling those on the spire in strength and spacing. Aperture subcircular; outer lip thin, showing the external sculpture within; inner lip strongly curved and slightly reflected.

The type, Cat. No. 250556, U.S.N.M., comes from Port Alfred (Coll. No. 1429). It has one and one-third postnuclear turns, and measures: Altitude, 1 mm.; greater diameter, 1.5 mm.

**CYCLOSTREMELLA AFRICANA**, new species.

Plate 29, figs. 1, 2, 3.

Shell purplish pink, obscurely dotted and flecked with white excepting the nuclear whorls, which are of yellowish horn color. Nuclear whorls two and one-half, smooth, forming a depressed helicoid spire. Postnuclear whorls well rounded, appressed at the summit, marked by many equal, and subequally spaced, fine, spiral lines which are about one-fourth as wide as the spaces that separate them. In addition to the spiral sculpture, the whorls are marked by fine lines of growth and irregularly distributed, strong, depressed lines which appear as feeble varicial markings. Sutures well marked. Periphery of the last whorl rounded. Base well rounded, very broadly, openly umbilicated, marked like the spire by fine, incised spiral lines and the axial sculpture, the strong impressed axial lines becoming accentuated at the umbilicus, rendering the outer umbilical edge strongly notched. Aperture subcircular; posterior angle slightly channeled; outer lip joining the basal lip in a strong, even curve; inner lip moderately thick, slightly revolute; parietal wall covered with a thick callus which is so developed as to give the aperture the appearance of being notched at this place.

The type and another specimen of this species, Cat. No. 187101, U.S.N.M., come from Port Alfred (Coll. No. 645). The type has a little more than one and one-half postnuclear whorls, and measures: Altitude, 1.7 mm.; greater diameter, 2.1 mm.

**CAPORBIS**, new genus.

Shell very small, sinistral, planorboid, marked with numerous lamellar, closely spaced, axial ribs.

*Type*.—*Caporbis africana*.

**CAPORBIS AFRICANA**, new species.

Plate 35, figs. 1, 2, 3.

Shell planorboid, sinistral, very small, bluish white, semitranslucent. Early whorls completely covered by the succeeding turns on the upper surface, where the last turn only is visible. This is marked by strong lamellar ribs which are decidedly sinuous and have

a retractive slant. These ribs become attenuated toward the summit to which they do not quite extend. They are about one-third as broad as the spaces that separate them. These spaces are marked near the periphery by a few, feebly expressed, fine, spiral lirations. Base sculpture similar to the upper surface except that only a very small portion of the smooth nuclear whorl is apparent. The ribs here decrease suddenly in size as they approach the inferior suture, and vanish just before reaching it. Aperture oblique, subcircular; outer lip thin, showing the external sculpture within; inner lip decidedly curved and somewhat reflected; parietal wall covered with a thick callus.

The type, Cat. No. 250519, U.S.N.M., comes from Port Alfred (Coll. No. 1392). It shows a little more than the last whorl, and measures: Altitude, 0.8 mm.; greater diameter, 1.8 mm.

Cat. No. 250518 contains another specimen from the same locality (Coll. No. 1391).

#### PONDORBIS, new genus.

Shell minute, dextral, depressed helicoid. Nuclear whorls smooth. Postnuclear whorls well rounded, ornamented with distantly spaced, very regular, sublamellar ribs.

*Type.*—*Pondorbis alfredensis*.

#### PONDORBIS ALFREDENSIS, new species.

Plate 36, figs. 1, 2, 3.

Shell minute, depressed helicoid, yellowish white. Nuclear whorls a little more than one, smooth, well rounded. Postnuclear whorls well rounded, marked at regularly spaced intervals by very regular, sublamellar, protractively curved, axial ribs, of which seventeen occur upon the first whorl, while the one-fifth of a whorl beyond the first postnuclear whorl contains ten riblets which are less strongly developed, and more closely spaced. Periphery strongly curved. Base well rounded, openly umbilicated, showing all the whorls within, marked like the spire. Aperture circular; peristome complete.

The type, Cat. No. 250557, U.S.N.M., comes from Port Alfred (Coll. No. 1430). It measures: Altitude, 0.2 mm.; greater diameter, 0.8 mm.

#### Genus DISCOPSIS de Folin.

#### DISCOPSIS PLANULATA Sowerby.

Cat. No. 186883, U.S.N.M., contains two specimens from Port Alfred (Coll. No. 253). Cat. No. 227784, U.S.N.M., three specimens from the same locality (Coll. No. 879). Cat. No. 227785, U.S.N.M., three specimens from the same source (Coll. No. 880).

*DISCOPSIS ALFREDENSIS*, new species.

Plate 31, figs. 1, 2, 3.

Shell small, sublenticular, white, excepting the nuclear whorls, which are pale chestnut brown. Nuclear whorls two, small, well-rounded, forming an elevated helicoid spire with strongly impressed suture. Postnuclear whorls very wide, moderately rounded, marked by decidedly retractive, wavy riblets, which, on the last half of the last volution, become irregular and strongly wavy. These riblets are about one-fourth as wide as the shallow concave spaces that separate them. The latter are crossed by spiral threads which are almost equal to the axial riblets in strength. There are about 20 of these between the summit and the periphery on the last turn. On the last half of the last turn these also become decidedly irregular and wavy, and the entire sculpture of this portion of the shell assumes a crinkly appearance. Periphery strongly angulated. Base with a very broad funnel-shaped umbilicus, which occupies fully half the space, and which is bordered by a tumid area at its exterior limit; the space between this tumid area and the peripheral angle is slightly concave. The entire surface of the base is marked by the continuation of the axial riblets, which are somewhat sinuous and become closer approximated here than on the spire. These riblets extend strongly into the umbilicus. The spaces between the riblets are marked by fine spiral striations. Aperture very large, very oblique, the basal and outer lip forming a decided angle at the periphery; posterior angle obtuse; outer lip decidedly patulous, thin, showing the external sculpture within; inner lip curved, thin, slightly reflected, the outer and the inner lip almost approaching each other on the parietal wall.

The type and another specimen of this species, Cat. No. 250533, U.S.N.M., come from Port Alfred (Coll. No. 1406). The type has 1.1 postnuclear whorls, and measures: Greater diameter, 1.8 mm.

*DISCOPSIS AFRICANA*, new species.

Plate 33, figs. 5, 6, 7.

Shell small, discoid, bluish white. Nuclear whorls two, well rounded, smooth, forming a depressed helicoid spire with strongly impressed sutures. Postnuclear whorls one and one-fifth, expanding rapidly in size, marked with a strong, lamellar, wavy, peripheral keel, which has a ruffle-like appearance. The space between the summit and this keel is marked with spiral cords, of which 17 are apparent on the outside of the outer lip. Of these, the fourth below the summit forms a strong shoulder, the fourth, sixth, ninth, eleventh, thirteenth, and fifteenth being stronger than the rest, while the remainder are of about equal strength. The space between the one

at the summit and the fourth is somewhat flattened, while that of the rest is evenly rounded. Base openly umbilicated; umbilicus occupying about one-third of the width of the base; bounded by a very slender spiral cord. The space from the base of the ruffle to this cord is evenly well rounded. The entire surface of the base is marked by rather strong lines of growth and microscopic spiral striations. This sculpture extends also into the umbilicus. Aperture very oblique, irregularly triangular; posterior angle acute; outer lip rendered denticulated by the external sculpture; inner lip slender, strongly sigmoid, and slightly reflected.

The type, Cat. No. 250561, U.S.N.M., comes from Port Alfred (Coll. No. 1434). Its greatest diameter is 2.3 mm.

**DISCOPSIS TURTONI**, new species.

Plate 33, figs. 1, 2, 3.

Shell small, discoidal, semitranslucent, bluish white. Nuclear whorls one and one-half, smooth, well rounded, forming a depressed helicoid spire with strongly impressed sutures. Postnuclear whorls two and one-fifth, broad, well-rounded, with strongly impressed sutures marked on the upper surface by rather strong, decidedly, retractively curved lines of growth. Periphery of the last whorl acutely keeled. Base very widely, openly umbilicated, there being scarcely any external limit to the umbilicus, all the whorls showing within. A slender spiral cord encircles the base about one-fourth of the distance anterior to the periphery. On the base the lines of growth assume a thread-like appearance, becoming stronger within the umbilicus. The entire base is marked by microscopic spiral striations. Aperture very oblique, of irregular outline; outer lip thin, sinuous, showing the external markings within; inner lip decidedly flexuose, thin.

The type and another specimen, Cat. No. 249766, U.S.N.M., come from Port Alfred (Coll. No. 1038). The type measures: Greatest diameter, 2.5 mm.; lesser diameter, 1.7 mm.

Genus **LEPTOGYRA** Bush.

**LEPTOGYRA AFRICANA**, new species.

Plate 36, figs. 4, 5, 6.

Shell very minute, semitranslucent, bluish white. Nuclear whorls two, well rounded, smooth, forming a depressed helicoid spire. Postnuclear whorls well rounded, marked by numerous fine, equal and equally spaced, incised spiral striations of which about 35 occur between the summit and the well-rounded periphery of the last whorl. The axial sculpture consists of fine lines of growth only. Base strongly rounded, somewhat inflated, with a moderately broad umbilicus marked by the continuation of the fine lines of growth, which grow a little stronger as they approach the umbilicus, and on the posterior



half by incised lines which correspond in every way with those on the spire. The anterior half is free of spiral sculpture. Aperture oblique, subcircular; posterior angle obtuse; outer lip rather thick, strongly curved; inner lip strongly curved and slightly reflected. A thick callus fills the posterior angle of the aperture.

The type, Cat. No. 250553, U.S.N.M., comes from Port Alfred (Coll. No. 1426). It has one and one-fourth postnuclear whorls, and measures: Altitude, 0.6 mm.; greater diameter, 1 mm.

### Family NERITIDAE.

#### Genus NERITA Lamarck.

##### NERITA ALBICILLA Linnaeus.

Cat. No. 21820, U.S.N.M., one specimen from Algoa Bay. Cat. No. 97991, U.S.N.M., four specimens from Kafraria, South Africa. Cat. No. 187086, U.S.N.M., four specimens from Port Alfred (Coll. No. 629). Cat. No. 250486, an additional specimen from the same locality (Coll. No. 1359). Cat. No. 272143, U.S.N.M., two from South Africa.

#### Genus NERITINA Lamarck.

##### NERITINA, species ?

Cat. No. 187088, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 631), which is different from any of the Neritinas heretofore reported from South Africa, or known to us, but is too poor to serve for a description. Cat. No. 250487, U.S.N.M., must be referred here for the same reason (Coll. No. 1360).

##### NEPIONIC SHELLS.

##### Plate 30, figs. 6, 7.

Cat. No. 187087, U.S.N.M., contains two nepionic shells of neritid shape, from Port Alfred (Coll. No. 630). They are very finely, spirally lirate. I do not know where they belong, but place them here simply on account of their shape. Cat. No. 249760, U.S.N.M., contains two additional specimens of the same species (Coll. No. 1032).

### Family HALIOTIDAE.

#### Genus HALIOTIS Linnaeus.

##### HALIOTIS MIDAE Linnaeus.

Cat. No. 43068, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 89103, U.S.N.M., three specimens from the Cape of Good Hope. Cat. No. 98002, U.S.N.M., six specimens from Albany, South Africa. Cat. No. 98003, U.S.N.M., eight specimens from Albany. Cat. No. 186886, U.S.N.M., three specimens from Port Alfred (Coll. No. 256). Cat. No. 187118, U.S.N.M., one specimen from the same place (Coll. No. 664). Cat. No. 249895, U.S.N.M., another specimen from the same locality (Coll. No. 1167).

##### HALIOTIS SANGUINEA Hanley.

Cat. No. 85, U.S.N.M., seven specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good



Hope. Cat. No. 16671, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 42848, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 89089, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 98004, U.S.N.M., two specimens from Albany. Cat. No. 186885, U.S.N.M., one specimen from Port Alfred (Coll. No. 255). Cat. No. 227786, U.S.N.M., three specimens from the same locality (Coll. No. 881).

*HALIOTIS PERTUSA* Reeve.

Cat. No. 33, U.S.N.M., three specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope.

*HALIOTIS PARVA* Linnaeus.

Cat. No. 187116, U.S.N.M., two specimens from Port Alfred (Coll. No. 662). Cat. No. 187117, U.S.N.M., one specimen from the same place (Coll. No. 663). Cat. No. 176, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at False Bay. Cat. No. 16970, U.S.N.M., one specimen from Cape of Good Hope. Collected by Carpenter.

*HALIOTIS ALFREDENSIS*, new species.

Plate 24, figs. 7, 8.

Shell elongate-ovate, irregularly mottled with chestnut brown and very pale olive buff flecks and dottings. The space between the base and the perforations is brown, with narrow radiating bands of pale olive buff which are about one-fourth as wide as the brown bands. The sculpture consists of fine, radiating, decidedly retractorily slanting threads on the early whorls, which become somewhat coarser, wider, and less sharply defined on the last half turn, and numerous fine spiral lirations which become more or less wavy anteriorly. The space between the perforations and the base is slightly concave on the posterior half and well rounded on the anterior half, and marked by the continuation of the lines of growth and wavy spiral striations. The nacre of the interior has a rosy flush, and a weak red wash within the spire. The spiral sculpture is apparent on the inside. This shell has the shape of *Haliotis midae*, but lacks the rugose sculpture of the exterior, the sculpture resembling more that of *Haliotis pertusa*, but differing from this in being much finer and more regular.

The type, Cat. No. 250517, U.S.N.M., comes from Port Alfred (Coll. No. 1390). It measures: Altitude, 12 mm.; length, 55 mm.; diameter, 39.5 mm.

Family SCISSURELLIDAE.

Genus SCISSURELLA Orbigny.

SCISSURELLA JUCUNDA Smith.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred. They are: Cat. No. 187097,

three specimens (Coll. No. 641); Cat. No. 250524, one specimen (Coll. No. 1397); Cat. No. 249761, four specimens (Coll. No. 1033).

Genus *SCHISMOPE* Jeffreys.

*SCHISMOPE INSIGNIS* Smith.

Cat. No. 249762, U.S.N.M., four specimens from Port Alfred (Coll. No. 1034). Cat. No. 249763, U.S.N.M., one specimen from the same locality (Coll. No. 1035).

Family *FISSURELLIDAE*.

Genus *FISSURELLA* Bruguiere.

*FISSURELLA NATALENSIS* Krauss.

Cat. No. 97992, U.S.N.M., two specimens from Albany. Cat. No. 186890, U.S.N.M., one from Port Alfred (Coll. No. 260).

*FISSURELLA MUTABILIS* Sowerby.

Cat. No. 150, U.S.N.M., nine specimens collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. Cat. No. 43075, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 89909, U.S.N.M., two specimens from the same place. Cat. No. 98030, U.S.N.M., three specimens from Albany, South Africa. Cat. No. 227799, U.S.N.M., six specimens from Port Alfred (Coll. No. 894). Cat. No. 227800, U.S.N.M., six specimens from the same locality (Coll. No. 895). Cat. No. 249777, U.S.N.M., four young specimens from the same place (Coll. No. 1049).

Genus *PUPILLAEA* Gray.

*PUPILLAEA APERTA* Sowerby.

Cat. No. 17329, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 89908, U.S.N.M., two specimens from the Cape of Good Hope. Cat. No. 98034, U.S.N.M., seven specimens from Albany, South Africa. Cat. No. 186887, U.S.N.M., one from Port Alfred (Coll. No. 257). Cat. No. 186888, U.S.N.M., three from the same source (Coll. No. 258). Cat. No. 186889, U.S.N.M., one from the same place (Coll. No. 259). The following seven lots showing variations of color pattern are also from Port Alfred: Cat. No. 227796, U.S.N.M., six specimens (Coll. No. 891); Cat. No. 227797, U.S.N.M., four specimens (Coll. No. 892); Cat. No. 227798, U.S.N.M., four specimens (Coll. No. 893); Cat. No. 250570, U.S.N.M., one specimen (Coll. No. 1443); Cat. No. 249776, U.S.N.M., three specimens (Coll. No. 1048); Cat. No. 249780, U.S.N.M., three specimens (Coll. No. 1052); Cat. No. 249781, U.S.N.M., three specimens (Coll. No. 1053).

Genus *FISSURIDEA* Swainson.*FISSURIDEA ELIZABETHAE* Smith.

Cat. No. 186891, U.S.N.M., one specimen from Port Alfred (Coll. No. 261).

*FISSURIDEA SPRETA* Smith.

Cat. No. 186893, U.S.N.M., one specimen from Port Alfred (Coll. No. 263).

*FISSURIDEA ELEVATA* Dunker.

Cat. No. 98040, U.S.N.M., two specimens from Peddie or Albany, South Africa. Cat. No. 186894, U.S.N.M., one specimen from Port Alfred (Coll. No. 264).

*FISSURIDEA CALYCVLATA* Sowerby.

Cat. No. 98039, U.S.N.M., four specimens from Peddie, South Africa. Cat. No. 186892, U.S.N.M., one specimen from Port Alfred (Coll. No. 262). Cat. No. 249778, U.S.N.M., three young specimens from the same place (Coll. No. 1050). Cat. No. 249779, U.S.N.M., three additional young specimens from the same locality (Coll. No. 1051).

*FISSURIDEA AUSTRALIS* Krauss.

Cat. No. 227801, U.S.N.M., two specimens from Port Alfred (Coll. No. 896).

*FISSURIDEA PARVIFORATA* Smith.

Cat. No. 187134, U.S.N.M., three specimens from Port Alfred (Coll. No. 680). Cat. No. 250569, U.S.N.M., an additional specimen from Port Alfred (Coll. No. 1442).

Genus *PUNCTURELLA* Lowe.*PUNCTURELLA AFRICANA*, new species.

Plate 30, figs. 4, 5.

Shell small, white, exceedingly delicate. The nucleus consisting of a little more than one whorl, the coil resting on the left side of the postnuclear portion of the shell. The postnuclear part of the shell increases very rapidly in size, the sides being marked by about 40 thread-like radial riblets which are a little more densely spaced on the anterior portion. These are crossed almost at right angles by a second series of raised threads which equal the first in strength and spacing, thus lending the surface a finely reticulated aspect. The plug filling the notch is transversely notched. The shell is so thin that all the external markings are seen within.

The type, Cat. No. 187135, U.S.N.M., comes from Port Alfred (Coll. No. 681). It measures: Altitude, 1.1 mm.; long diameter, 1.9 mm.; transverse diameter, 1.3 mm.

## Order POLYPLACOPHORA.

## Family ISCHNOCHITONIDAE.

## Genus CALLOCHITON Gray.

## CALLOCHITON CASTANEUS Wood.

Cat. No. 186907, U.S.N.M., contains four valves of this species from Port Alfred (Coll. No. 277). Cat. No. 249828, U.S.N.M., contains two additional complete specimens from the same locality (Coll. No. 1100).

## Genus ISCHNOCHITON Gray.

## ISCHNOCHITON CRAWFORDI Sykes.

Cat. No. 250603, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 1476). Cat. No. 187140, U.S.N.M., contains a single valve from the same place (Coll. No. 686).

## ISCHNOCHITON CYANEOPUNCTATUS Krauss.

Cat. No. 125380, U.S.N.M., contains a specimen obtained on the United States Eclipse Expedition of 1890 at Cape Town.

## ISCHNOCHITON ONISCUS Krauss.

Two lots of this species were obtained by William Stimpson on the North Pacific Exploring Expedition: One, Cat. No. 122, U.S.N.M., a complete specimen and a lot of valves, at the Cape of Good Hope; the other, Cat. No. 143, U.S.N.M., one specimen at Simons Bay, Cape of Good Hope. In addition to these there are 35 lots of this species, which are extremely variable in color markings, in the collection of the United States National Museum, from Port Alfred, as follows: Cat. No. 187137, one specimen (Coll. No. 683); Cat. No. 187136, one specimen (Coll. No. 682); Cat. No. 187138, one specimen (Coll. No. 684); Cat. No. 187140a, one valve (Coll. No. 686a); Cat. No. 249803, three specimens (Coll. No. 1075); Cat. No. 249804, three specimens (Coll. No. 1076); Cat. No. 249805, three specimens (Coll. No. 1077); Cat. No. 249806, three specimens (Coll. No. 1078); Cat. No. 249807, two specimens (Coll. No. 1079); Cat. No. 249808, three specimens (Coll. No. 1080); Cat. No. 249809, three specimens (Coll. No. 1081); Cat. No. 249810, three specimens (Coll. No. 1082); Cat. No. 249811, three specimens (Coll. No. 1083); Cat. No. 249812, one specimen (Coll. No. 1084); Cat. No. 249813, three specimens (Coll. No. 1085); Cat. No. 249814, two specimens (Coll. No. 1086); Cat. No. 249815, three specimens (Coll. No. 1087); Cat. No. 249816, two specimens (Coll. No. 1088); Cat. No. 249817, three specimens (Coll. No. 1089); Cat. No. 249822, two specimens (Coll. No. 1094); Cat. No. 250606, one specimen (Coll. No. 1479); Cat. No. 250608, one specimen (Coll. No. 1481); Cat. No. 250609, one specimen (Coll. No. 1482); Cat. No. 250610, two specimens (Coll. No. 1483); Cat. No. 250611, two speci-

mens (Coll. No. 1484); Cat. No. 250612, one specimen (Coll. No. 1485); Cat. No. 250613, one specimen (Coll. No. 1486); Cat. No. 250614, three specimens (Coll. No. 1487); Cat. No. 250615, two specimens (Coll. No. 1488); Cat. No. 250616, one specimen (Coll. No. 1489); Cat. No. 250617, one specimen (Coll. No. 1490); Cat. No. 250618, two specimens (Coll. No. 1491); Cat. No. 250619, one specimen (Coll. No. 1492); Cat. No. 250620, one specimen (Coll. No. 1493); Cat. No. 250621, one specimen (Coll. No. 1494).

**ISCHNOCHITON TIGRINUS Krauss.**

Cat. No. 177, U.S.N.M., contains a specimen collected by William Stimpson on the North Pacific Exploring Expedition on the Cape of Good Hope. Cat. No. 110252, U.S.N.M., contains three specimens from the same place. In addition to these, there are four lots in the collection of the United States National Museum from Port Alfred, as follows: Cat. No. 249818, one specimen (Coll. No. 1090); Cat. No. 250604, one specimen (Coll. No. 1477); Cat. No. 250607, one specimen (Coll. No. 1480); Cat. No. 250624, one specimen (Coll. No. 1497).

**Genus DINOPLAX Carpenter.**

**DINOPLAX GIGAS Gmelin.**

Cat. No. 110201, U.S.N.M., one specimen from the Cape of Good Hope. In addition to this, the United States National Museum has seven lots from Port Alfred, as follows: Cat. No. 186908, two valves (Coll. No. 278); Cat. No. 229832, one specimen (Coll. No. 1104); Cat. No. 249829, four specimens (Coll. No. 1101); Cat. No. 249830, two complete specimens (Coll. No. 1102); Cat. No. 250600, one specimen (Coll. No. 1473); Cat. No. 250601, one specimen (Coll. No. 1474); Cat. No. 250602, one specimen (Coll. No. 1475).

**DINOPLAX GIGAS ALFREDENSIS, new subspecies.**

Plate 39, figs. 1, 2.

Shell similar to *Dinoplax gigas* in outline and coloring, but with the sculpture in every way much finer. Radiating lines of the lateral areas and the anterior plate only very feebly expressed, with the central very finely truncate as compared with *D. gigas*.

The type, Cat. No. 249831, U.S.N.M., comes from Port Alfred (Coll. No. 1103); it measures: Length, 62 mm.; diameter, 22 mm. Another specimen is registered as 249820, U.S.N.M., and comes from the same locality (Coll. No. 1092).

**DINOPLAX FOSSUS Sykes.**

Cat. No. 249823, U.S.N.M., contains a young specimen from Port Alfred (Coll. No. 1095).



## Family ACANTHOCHITIDAE.

## Genus ACANTHOCHITES Risso.

## ACANTHOCHITES GARNOTI Blainville.

Cat. No. 173, U.S.N.M., four specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. In addition to these there are five lots in the collection of the United States National Museum from Port Alfred, as follows: Cat. No. 186909, three valves (Coll. No. 279); Cat. No. 187139, six valves (Coll. No. 685); Cat. No. 249819, three specimens (Coll. No. 1091); Cat. No. 249821, two specimens (Coll. No. 1093); Cat. No. 249824 three specimens (Coll. No. 1096).

## ACANTHOCHITES CARPENTERI Pilsbry.

Cat. No. 250605, U.S.N.M., contains a specimen from Port Alfred (Coll. No. 1478).

## Family CHITONIDAE.

## Genus CHITON Linnaeus.

## CHITON TULIPA Quoy and Gaimard.

Cat. No. 19300, U.S.N.M., three valves from the Cape of Good Hope. Cat. No. 110222, U.S.N.M., three specimens from the Cape of Good Hope. Cat. No. 110218, U.S.N.M., two specimens from the same locality. Cat. No. 110250, one specimen from Algoa Bay. In addition to these, there are four lots in the collection of the United States National Museum from Port Alfred, as follows: Cat. No. 249825, six specimens (Coll. No. 1097); Cat. No. 249826, three specimens (Coll. No. 1098); Cat. No. 249827, one specimen (Coll. No. 1099); Cat. No. 186906, one specimen (Coll. No. 276).

## CHITON, species?

There are valves of two lots of Chitons, which we are unable to place, in the collection from Port Alfred, as follows: Cat. No. 250622, U.S.N.M. (Coll. No. 1495); Cat. No. 250623, U.S.N.M. (Coll. No. 1496).

## Class SCAPHOPODA.

## Order SOLENOCONCHA.

## Family DENTALIIDAE.

## Genus DENTALIUM Linnaeus.

## DENTALIUM STRIGATUM Gould.

Plate 44, fig. 5.

*Dentalium strigatum* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 7, p. 166, 1859.

Shell moderately curved, white. Marked by 13 strong equal and equally spaced longitudinal cords, the spaces between which are marked by 9-11 fine incised lines. In addition to this longitudinal sculpture the entire surface is crossed by very fine lines of growth.

Gould's cotypes, Cat. No. 159, U.S.N.M., four specimens collected by William Stimpson on the North Pacific Exploring Expedition at False Bay, Cape of Good Hope. The specimen figured measures: Length, 15.1 mm.; diameter, 2.5 mm.

**DENTALIUM EXASPERATUM** Sowerby.

Cat. No. 186910, U.S.N.M., three specimens from Port Alfred (Coll. No. 280). Cat. No. 250592, U.S.N.M., six additional specimens from Port Alfred (Coll. No. 1465).

**DENTALIUM REGULARE** Smith.

Cat. No. 187150, U.S.N.M., one specimen from Port Alfred (Coll. No. 697). Cat. No. 250593, U.S.N.M., four specimens from the same locality (Coll. No. 1466).

**DENTALIUM**, species?

Cat. No. 249795, U.S.N.M., contains two fragments of a *Dentalium*, which we are unable to determine, from Port Alfred (Coll. No. 1067).

**Genus SCHIZODONTALIUM** Sowerby.

**SCHIZODONTALIUM PLURIFISSURATUM** Sowerby.

Cat. No. 163019, U.S.N.M., one specimen, dredged in 100 fathoms off Cape St. Blaize, South Africa.

**Class PELECYPODA.**

**Order PRIONODESMACEA.**

**Family NUCULIDAE.**

**Genus NUCULA** Lamarck.

**NUCULA SCULPTURATA** Sowerby.

Cat. No. 186966, U.S.N.M., two specimens from Port Alfred (Coll. No. 338).

**NUCULA NUCLEUS** Linnaeus.

Cat. No. 249893, U.S.N.M., contains a very young specimen of a *Nucula*, which appears to be of this species, from Port Alfred (Coll. No. 1165).

**Family LIMOPSIDAE.**

**Genus LIMOPSIS** Sasso.

**LIMOPSIS PUMILIS** Smith.

Cat. No. 186924, U.S.N.M., six valves from Port Alfred (Coll. No. 294).

**Family ARCIDAE.**

**Genus GLYCIMERIS** Da Costa.

**GLYCIMERIS QUEKETTI** Sowerby.

Cat. No. 186923, U.S.N.M., three valves from Port Alfred (Coll. No. 293). Cat. No. 251067a, U.S.N.M., contains a very young specimen of this species (Col. No. 1584a).

Genus *ARCA* Lamarek.*ARCA ACUMINATA* Krauss.

Cat. No. 187158, U.S.N.M., one specimen from Port Alfred (Coll. No. 705).

Genus *FOSSULARCA* Cossmann.*FOSSULARCA GIBBA* Krauss.

Cat. No. 186921, U.S.N.M., one specimen from Port Alfred (Coll. No. 291).

*FOSSULARCA GRADATA* Broderip and Sowerby.

Cat. No. 187155, U.S.N.M., contains one specimen and three valves of this species from Port Alfred (Coll. No. 702).

Genus *BARBATIA* (Gray) Adams.*BARBATIA ALFREDENSIS*, new species.

Plate 46, figs. 9, 10.

Shell rhomboidal. Surface covered with a thick, dark brown epidermis from which project numerous imbricating scales. The umbones are situated in the anterior third of the entire length of the shell. The hinge line is very slightly arcuated, the ventral margin usually incurved. Anterior end much narrower than the broad posterior end. Entire surface marked with numerous fine radiating riblets which are crossed by concentric lines of growth rendering the sculpture of the surface somewhat reticulated. The interior of the shell is bluish white, excepting that portion which lies dorsal and posterior to a line passing from the umbones to the posterior ventral margin, which is chestnut brown.

The type and three specimens, Cat. No. 186922, U.S.N.M., come from Port Alfred (Coll. No. 292). The type measures: Length, 34 mm.; height, 18 mm.; thickness, 12.5 mm.

This is what has probably been listed as *Arca obliquata* Gray, a Philippine Island species, which differs from the present species by its much larger size, detailed sculpture, and color.

*BARBATIA*, species ?

Cat. No. 18804, U.S.N.M., contains a specimen from Natal which we are unable to refer to any of the known species, but which is too poor to serve for a diagnosis.

*BARBATIA*, species ?

Cat. No. 187157, U.S.N.M., contains six valves of a *Barbatia* from Port Alfred, which we are unable to refer to any of the described species, but is too poor to serve for a diagnosis (Coll. No. 704). Cat. No. 249850, U.S.N.M., contains six additional valves of the same species, in the same condition, from the same place (Coll. No. 1122).

*BARBATIA CAFRIA*, new species.

Plate 38, figs. 1, 5.

Shell small, rather gibbous, the umbones salmon colored, the rest yellowish white. The epidermis, when present, dark chocolate brown. The two valves similarly sculptured, the epidermis forming strong setae on every third radiating riblet, while the two intermediate ones seem simply to be covered with a smooth integument. There are 29 of the setaceous ribs on each valve and double that number of the intermediary ones. The riblets bearing the setae are strongly nodulose, while the others are almost smooth. Ligamental area narrow, marked by transverse grooves. Interior white.

The type and another specimen of this species, Cat. No. 249849, U.S.N.M., come from Port Alfred (Coll. No. 1121). The type measures: Altitude, 8.5 mm.; length, 14.2 mm.; diameter, 8.6 mm.

Cat. No. 187156, U.S.N.M., contains four additional valves from the same place (Coll. No. 703).

## Family PINNIDAE.

## Genus PINNA Lamarck.

*PINNA SQUAMIFERA* Sowerby.

Cat. No. 187159, U.S.N.M., two specimens from Port Alfred (Coll. No. 706). Cat. No. 227814, U.S.N.M., contains two additional specimens from the same locality (Coll. No. 909).

## Genus ATRINA Gray.

*ATRINA ALFREDENSIS*, new species.

Plate 40, fig. 3.

Shell depressed pyriform; horn colored, darker at the tip. The interior is dull horn colored, excepting the tip, which is smoky pearly. Upper side slightly curved; the ventral edge decidedly concave; posterior portion decidedly expanded. The surface is marked with five poorly developed and poorly expressed radiating ridges beset with decidedly elevated squamations, which are strongest on the three median ridges. The ventral border is rendered rasp-like by fine poorly developed squamations.

The type and another specimen, Cat. No. 227815, U.S.N.M., come from Port Alfred (Coll. No. 910). The type measures: Length, 73 mm.; greater diameter, 50 mm.

*ATRINA AFRA* Sowerby (?).

Cat. No. 187160, U.S.N.M., contains fragments of probably this species from Port Alfred (Coll. No. 707). Cat. No. 250991, U.S.N.M., contains another fragment of this species, from the same locality (Coll. No. 1508).

## Genus HOCHSTETTERIA Vélain.

## HOCHSTETTERIA LIMOIDES Smith.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186925, contains three valves of this species (Coll. No. 295); Cat. No. 186930, one valve (Coll. No. 300); Cat. No. 251067, one specimen (Coll. No. 1584).

## HOCHSTETTERIA VELAINI Smith.

Cat. No. 186926, U.S.N.M., two specimens from Port Alfred (Coll. No. 296).

## HOCHSTETTERIA ALFREDENSIS, new species.

Plate 39, figs. 6, 7.

Shell white, variously mottled with brown. Prodissoconch forming a conspicuous shield which is separated from the rest of the shell by a strongly raised cord. The anterior and posterior lateral portion of the succeeding part forms almost an isosceles triangle, the basal portion of which is well rounded. The valves are marked by fifteen moderately strong, very regular radiating threads, and very regularly spaced, equally strong, concentric threads, which form squarish pits on the early portion of the shell and elongate pits near the base. The junction of the radiate and concentric threads forms feeble, rounded nodules. The hinge is shown in our figure.

Cat. No. 182925a, U.S.N.M., contains the type and two additional specimens from Port Alfred (Coll. No. 295a). The type measures: Altitude, 3.6 mm.; length, 3.3 mm. Cat. No. 249855, U.S.N.M., contains another specimen from the same place (Coll. No. 1127).

## HOCHSTETTERIA PARAMOEAE, new species.

Plate 39, fig. 4.

Shell semitranslucent, white. Prodissoconch forming a conspicuous shield which is separated from the rest of the shell by a strongly raised cord. The shield itself is marked by very fine, closely spaced, radiating threads. The anterior lateral margin of the succeeding part slightly concave; posterior slightly convex; basal margin strongly rounded. Outer surface marked by nine equal, and equally spaced, regular, slender, radiating threads, and equally strong, very regularly spaced, concentric threads, the junction of the two forming feeble nodules.

Cat. No. 249854, U.S.N.M., contains the type and another specimen from Port Alfred (Coll. No. 1126). The type measures: Altitude, 2.2 mm.; length, 2.1 mm.



Genus *PHILOBRYA* Carpenter.*PHILOBRYA AFRICANA*, new species.

Plate 46, figs. 1, 2.

Shell small, translucent, white, broadly triangular, with the beaks at the apex of the triangle. Dorsal edge slightly curved, ventral somewhat concaved; posterior portion well rounded. The junction of the posterior and dorsal edges form somewhat of an angle and give the shell an alate aspect. The external surface of the shell is marked by fine concentric lines of growth and numerous, exceedingly fine, irregularly radiating, hair-like streaks which give to the surface a silky luster.

The type and another specimen, Cat. No. 187154, U.S.N.M., come from Port Alfred (Coll. No. 701). The type measures: Length, 5 mm.; diameter, 4 mm.

In addition to these, the United States National Museum contains five lots, all from Port Alfred, as follows: Cat. No. 227811, six valves (Coll. No. 906); Cat. No. 227812, five valves (Coll. No. 907); Cat. No. 249841, two specimens (Coll. No. 1113); Cat. No. 251001, one valve (Coll. No. 1518); Cat. No. 251007, one valve (Coll. No. 1524).

Family *PTERIIDAE*.Genus *MARGARITIPHORA* Muhlfield.*MARGARITIPHORA NATALENSIS* Jameson.

Cat. No. 17225, U.S.N.M., contains a specimen from the Cape of Good Hope.

*MARGARITIPHORA CAPENSIS* Sowerby.

Cat. No. 186914, U.S.N.M., one specimen from Port Alfred (Coll. No. 284).

Family *OSTREIDAE*.Genus *OSTREA* Lamarck.*OSTREA ALGOENSIS* Sowerby.

Cat. No. 175, U.S.N.M., contains a specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, on rocks at low water. In addition to this, the United States National Museum contains 14 lots from Port Alfred, as follows: Cat. No. 187163, four specimens (Coll. No. 710); Cat. No. 187164, one specimen (Coll. No. 711); Cat. No. 187165, eight valves (Coll. No. 712); Cat. No. 249833, two young specimens (Coll. No. 1105); Cat. No. 250981, one specimen (Coll. No. 1498); Cat. No. 250982, two valves (Coll. No. 1499); Cat. No. 250983, one specimen (Coll. No. 1500);

Cat. No. 250984, one valve (Cat. No. 1501); Cat. No. 250985, one valve (Coll. No. 1502); Cat. No. 250986, four valves (Coll. No. 1503); Cat. No. 250987, two valves (Coll. No. 1504); Cat. No. 250989, three very young valves (Coll. No. 1506); Cat. No. 250990, one valve (Coll. No. 1507); Cat. No. 250992, one valve (Coll. No. 1509).

### Family PECTINIDAE.

#### Genus PECTEN Müller

##### PECTEN NATALENSIS Smith.

Cat. No. 17429, U.S.N.M., nine valves from South Africa. Cat. No. 43171, U.S.N.M., seven valves from Cape of Good Hope. Cat. No. 186913, U.S.N.M., one specimen from Port Alfred (Coll. No. 283). Cat. No. 249852, U.S.N.M., three valves from the same place (Coll. No. 1124).

##### PECTEN SULCICOSTATUS Sowerby.

Cat. No. 228, U.S.N.M., a fragment collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. Cat. No. 187151, U.S.N.M., two valves from Port Alfred (Coll. No. 698). Cat. No. 249851, U.S.N.M., two additional valves from the same place (Coll. No. 1123).

### Family SPONDYLIDAE.

#### Genus PLICATULA Lamarck.

##### PLICATULA SQUAMOSISSIMA Smith.

Cat. No. 251009, U.S.N.M., contains a specimen of this species from Port Alfred (Coll. No. 1526).

### Family LIMIDAE.

#### Genus LIMA (Bruguiere) Cuvier.

##### LIMA PERFECTA Smith.

Cat. No. 186912, U.S.N.M., one specimen from Port Alfred (Coll. No. 282).

##### LIMA ROTUNDATA Sowerby.

Cat. No. 17802, U.S.N.M., two valves from the Cape of Good Hope. Cat. No. 186911, U.S.N.M., one specimen from Port Alfred (Coll. No. 281). Cat. No. 250995, U.S.N.M., one valve from the same locality (Coll. No. 1512). Cat. No. 251004, U.S.N.M., two very young valves from the same place (Coll. No. 1521).

## LIMA AFRICANA, new species.

Plate 38, fig. 4.

Shell small, thin, inaequivalve, bluish white, gaping at the posterior lateral border and at the middle of the ventral border. Hinge line slightly sloping in both directions from the umbones. The lateral margin is concave immediately below the junction of the hinge line, then strongly curved toward the anterior border. The ventral margin is also slightly concave immediately below the hinge line, then almost straight, curving suddenly upon reaching the anterior margin. The exterior sculpture consists of about fifty fine radiating riblets. The posterior ventral and lateral borders are not ribbed. Interior bluish white, showing the external riblets by transmitted light.

The type, Cat. No. 249853, U.S.N.M., comes from Port Alfred (Coll. No. 1125). It measures: Length, 13.5 mm.; diameter, 9 mm.; thickness, 5 mm.

This is evidently the shell which has been listed as *Lima hians tenera* Turton. It is not that species however. The sculpture is much finer and less regularly fluted than in *tenera*, and the shell is much shorter and more rounded than *tenera*, the latter being elongate.

## LIMA, species?

Cat. No. 251002, U.S.N.M., contains a very young *Lima*, from Port Alfred, which I am unable to identify (Coll. No. 1519). Cat. No. 250376, U.S.N.M., contains another very young *Lima* from Port Alfred, in the same state (Coll. No. 1249).

## Family ANOMIIDAE.

## Genus ANOMIA Müller.

## ANOMIA EPHIPPIUM Linnaeus.

Cat. No. 136, U.S.N.M., contains a young specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. In addition to this, there are six lots of young specimens in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187162, three valves (Coll. No. 709); Cat. No. 249836, three valves (Coll. No. 1108); Cat. No. 250988, four valves (Coll. No. 1505); Cat. No. 250993, one valve (Coll. No. 1510); Cat. No. 250531, one valve (Coll. No. 1404); Cat. No. 251060, one valve (Coll. No. 1577).

## ANOMIA PATELLIFORMIS Linnaeus.

There are five lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No.

187161, five valves (Coll. No. 708); Cat. No. 187162, four valves (Coll. No. 709); Cat. No. 249834, one specimen (Coll. No. 1106); Cat. No. 249835, one specimen and three valves (Coll. No. 1107); Cat. No. 250591, one specimen (Coll. No. 1464).

### Family MYTILIDAE.

#### Genus MYTILUS Bolten.

##### MYTILUS MERIDIONALIS Krauss.

Cat. No. 17960, U.S.N.M., one specimen from Natal. Cat. No. 17963, U.S.N.M., one specimen from South Africa. Cat. No. 98049, U.S.N.M., one specimen from Albany. Cat. No. 250998, U.S.N.M., contains two valves from Port Alfred (Coll. No. 1515).

##### MYTILUS PERNA Linnaeus.

The United States National Museum has four lots of this species, all from Port Alfred, as follows: Cat. No. 186915, two specimens (Coll. No. 285); Cat. No. 186916, one specimen (Coll. No. 286); Cat. No. 250999, one valve (Coll. No. 1516); Cat. No. 249838, two specimens (Coll. No. 1110).

##### MYTILUS PERNA TRIGONIA Krauss.

There are three lots of this subspecies in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187152, one valve (Coll. No. 699); Cat. No. 249837, two specimens (Coll. No. 1109); Cat. No. 249842, two specimens (Coll. No. 1114).

##### MYTILUS VARIABILIS Krauss.

There are four lots of this species in the collection of the United States National Museum, all from the Cape of Good Hope, as follows: Cat. No. 17973, one specimen; Cat. No. 43183, six specimens; Cat. No. 76032, two specimens; Cat. No. 125368, twenty-four specimens, collected by the United States Eclipse Expedition; Cat. No. 250997, U.S.N.M., one specimen from Port Alfred (Coll. No. 1514).

##### MYTILUS VARIABILIS STRIATA Krauss.

There are three lots of this subspecies in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187153, four specimens (Coll. No. 700); Cat. No. 249839, two specimens (Coll. No. 1111); Cat. No. 249844, two specimens (Coll. No. 1116).

#### Genus MODIOLA Lamarck.

##### MODIOLA TENERRIMA Smith.

There are three lots of this species in the collection of the United States National Museum, from Port Alfred, as follows: Cat. No. 186917, two specimens (Coll. No. 287); Cat. No. 249847, one valve (Coll. No. 1119); Cat. No. 249846, two specimens (Coll. No. 1118).

## MODIOLA CAPENSIS Krauss.

Cat. No. 167, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 43184, U.S.N.M., three specimens from the Cape of Good Hope. In addition to these, there are three lots in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186918, two and one-half specimens (Coll. No. 288); Cat. No. 249843, two specimens (Coll. No. 1115); Cat. No. 249845, one specimen (Coll. No. 1117).

## MODIOLA AURICULATA Krauss.

Cat. No. 227813, U.S.N.M., contains three specimens of this species from Port Alfred (Coll. No. 908). Cat. No. 249840, U.S.N.M., contains another specimen from the same place (Coll. No. 1112).

## MODIOLA LIGNEA Reeve.

Cat. No. 186919, U.S.N.M., one specimen from Port Alfred (Coll. No. 289).

## Genus CRENELLA Brown.

## CRENELLA STRIATISSIMA Sowerby.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187183, two valves (Coll. No. 734); Cat. No. 227820, two valves (Coll. No. 915); Cat. No. 251062, a young specimen (Coll. No. 1579).

## CRENELLA ALFREDENSIS, new species.

Plate 41, fig. 1; plate 49, fig. 1.

Shell small, milk white, of very regular oval outline, the outer surface marked by numerous, very fine, radiating threads and rather strong incremental lines.

The type and another valve, Cat. No. 251006, U.S.N.M., come from Port Alfred (Coll. No. 1523). It measures: Altitude, 3.2 mm.; length, 2.1 mm.

This species agrees with *Crenella striatissima* in size, but differs markedly from it in outline, *striatissima* having a mytiloid shape, while the present species is practically a perfect oval in outline.

## Genus MODIOLARIA Beck.

## MODIOLARIA CUNEATA Gould.

Plate 42, figs. 5, 6.

*Modiolaria cuneata* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 38, 1861.

Shell moderately large, cream yellow, considerably inflated. Umbones prominent, extending to the anterior limit of the shell. Dorsal edge short, posterior dorsal edge sloping abruptly, curving



ventrally. Basal edge somewhat sinuous. Anterior end with 16 radiating, low, flattened cords; posterior end with 17.

Gould's cotypes, six specimens, Cat. No. 126, U.S.N.M., were collected by William Stimpson on the North Pacific Exploring Expedition at Simon's Bay. The specimen figured measures: Length, 11.8 mm.; altitude, 7 mm.; diameter, 7 mm. Cat. No. 186920, U.S.N.M., one specimen from Port Alfred (Coll. No. 290).

**MODIOLARIA AFRICANA, new species.**

Plate 41, fig. 2.

Shell small, pale yellow. Hinge margin almost straight; posterior lateral margin evenly, gradually rounded, the anterior lateral shortly, strongly rounded, the basal slightly emarginate. The posterior portion is marked by about 50 rather strong, radiating, axial riblets, while the extreme anterior bears 12. In addition to the radiating sculpture, the shell is marked by rather strong, concentric threads which render the radiating riblets crenulated at their junction. The area devoid of radiating sculpture is equal to about one-third of the entire length of the shell at the basal margin.

The type, Cat. No. 251000, U.S.N.M., comes from Port Alfred (Coll. No. 1517). It measures: Altitude, 2 mm.; length, 3.5 mm.

**MODIOLARIA IMA, new species.**

Plate 40, figs. 4, 5.

Shell pale green, variously mottled with brown. Dorsal margin slightly curved, the posterior lateral strongly, evenly so, the anterior lateral very strongly, shortly curved, the basal slightly emarginate anteriorly. The posterior portion of the shell is marked by 16, broad, low, rounded, radiating riblets, which become narrower and closer spaced toward the dorsal margin. The anterior end is marked by 4, weak, radiating riblets. In addition to the radiating sculpture, the shell is marked by irregular incremental lines, which pass over the radiating sculpture as fine threads, but do not render them crenulated. The area devoid of radiating sculpture is equal to about two-fifths of the length of the shell at the ventral border.

The type and another valve, Cat. No. 249848, U.S.N.M., come from Port Alfred (Coll. No. 1120). The type measures: Altitude, 4 mm.; length, 7 mm.

**Order ANOMALODESMACEA.**

**Family SOLEMYIDAE.**

**Genus SOLEMYA Lamarck.**

**SOLEMYA, species?**

Cat. No. 250996, U.S.N.M., contains fragments of a young specimen too poor to be determined, from Port Alfred (Coll. No. 1513).

## Family LYONSIDAE.

## Genus LYONSIA Turton.

## LYONSIA, species?

Cat No. 249877, U.S.N.M., contains two valves of a *Lyonsia* too poor to be determined, from Port Alfred (Coll. No. 1149).

## Family THRACIDAE.

## Genus THRACIA Blainville.

## THRACIA, species?

There are five lots of young *Thracia* in the collection of the United States National Museum, all from Port Alfred, but they are too young to be properly determined: Cat. No. 187181, one valve (Coll. No. 732); Cat. No. 187186, one valve (Coll. No. 737); Cat. No. 249878, two valves (Coll. No. 1150); Cat. No. 249881, two specimens (Coll. No. 1153); Cat. No. 249882, three specimens (Coll. No. 1154).

## Genus CLISTOCONCHA Smith.

## CLISTOCONCHA INSIGNIS Smith.

There are six lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 227819, three specimens (Coll. No. 914); Cat. No. 249868, one specimen (Coll. No. 1140); Cat. No. 249869, one specimen (Coll. No. 1141); Cat. No. 249870, one specimen (Coll. No. 1142); Cat. No. 249879a, one specimen (Coll. No. 1151a); Cat. No. 249880, two specimens (Coll. No. 1152).

## Order TELEODESMACEA.

## Family CRASSATELLITIDAE.

## Genus CRASSATELLITES Krüger.

## CRASSATELLITES ACUMINATA Sowerby.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186933, one and one-half specimens (Coll. No. 303); Cat. No. 251017, two valves (Coll. No. 1534); Cat. No. 251018, another young valve (Coll. No. 1535).

## Genus CUNA Hedley.

## CUNA CONCENTRICA, new species.

Plate 47, fig. 3; plate 52, figs. 11, 12.

Shell minute, thin, bluish white, semitransparent, having an almost triangular outline, with the posterior dorsal margin quite evenly curved and the anterior slightly concave. Entire surface marked by very regular, strong, threadlike, concentric rings, which are a

little wider than the spaces that separate them. Interior showing the external sculpture through the substance of the shell. Entire inner basal margin marked by alternating squarish teeth and depressions, forming a series of sockets and teeth which alternate in the opposing valves. The character of the hinge is shown in our detailed figure.

The type and another valve, Cat. No. 251049, U.S.N.M., come from Port Alfred (Coll. No. 1566). The type measures: Altitude, 1.2 mm.; length, 1.2 mm.

### Family CARDITIDAE.

#### Genus CARDITA Bruguiere.

##### CARDITA VARIEGATA TURGIDA Krauss.

Cat. No. 32055, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 43172, U.S.N.M., two valves from the Cape of Good Hope.

##### CARDITA (CARDITAMERA) LATICOSTATA Smith.

Cat. No. 186929, U.S.N.M., four valves from Port Alfred (Coll. No. 299). Cat. No. 251010, two valves from the same locality (Coll. No. 1527).

#### Genus VENERICARDIA Lamarck.

##### VENERICARDIA ELATA Sowerby.

Cat. No. 186931, U.S.N.M., two specimens from Port Alfred (Coll. No. 301).

##### VENERICARDIA AFRICANA, new species.

Plate 48, fig. 3; plate 54, figs. 5, 6.

Shell small, rather thick, rose colored. Umbones bent decidedly forward, forming a rather strong-pointed hook. Surface marked by 12 strong, rounded, radiating ribs, of which the central ones are the heaviest. These ribs give the ventral edge a somewhat fluted appearance. In addition to these radiating ribs, the shell is marked with strong, concentric, sublamellar threads, which pass equally strong over the ribs and the intercostal spaces. The character of the hinge is shown in our detailed sketch.

Cat. No. 187171, U.S.N.M., contains the type, which comes from Port Alfred (Coll. No. 720). It measures: Altitude, 3.1 mm.; length, 2.8 mm.

Cat. No. 251012, U.S.N.M., contains two additional valves from the same locality (Coll. No. 1529).

#### Genus THECALIA H. and A. Adams.

##### THECALIA CONCAMERATA Bruguiere.

Cat. No. 137, U.S.N.M., 12 specimens collected by William Stimpson on the North Pacific exploring expedition at the Cape of Good Hope.

Cat. No. 98038, U.S.N.M., four specimens from Albany. Cat. No. 186927, U.S.N.M., two specimens from Port Alfred (Coll. No. 297). Cat. No. 227817, U.S.N.M., two specimens from the same locality (Coll. No. 912).

Genus *MIODONTISCUS* Dall.

*MIODONTISCUS MINIMUS* Smith.

There are four lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186932, four and one-half specimens (Coll. No. 302); Cat. No. 249856, four valves (Coll. No. 1128); Cat. No. 249857, four valves (Coll. No. 1129); Cat. No. 251008, two valves (Coll. No. 1525).

Family *CONDYLOCARDIIDAE*.

Genus *CONDYLOCARDIA* Smith.

*CONDYLOCARDIA IO*, new species.

Plate 48, fig. 1; plate 54, figs. 7, 8.

Shell irregularly oval, rather inflated, thin, semitranslucent. Prodissoconch forming a conspicuous shield having an elevated mammillate area at its apex, separated from the succeeding portion of the shell by a strongly raised ridge. Succeeding portion of the shell marked by very fine concentric threads which become slightly stronger as the shell attains maturity. The character of the hinge is shown by the detailed sketch.

Cat. No. 251066, U.S.N.M., contains two specimens of this species from Port Alfred (Coll. No. 1583). The type measures: Altitude, 2.3 mm.; length, 2.6 mm.

Genus *CARDITELLA* Smith.

*CARDITELLA RUGOSA* Sowerby.

Cat. No. 186928, U.S.N.M., three specimens from Port Alfred (Coll. No. 298).

Genus *CARDITOPSIS* Smith.

*CARDITOPSIS ALFREDENSIS*, new species.

Plate 48, fig. 4; plate 54, figs. 3, 4.

Shell minute, subtrigonal, rather thick, bluish white, marked by feebly impressed lines of growth, and very weak, low, radiating threads. Edge of the shell thick all around. Basal margin weakly crenulated. The character of the hinge is shown in our detailed sketch.

The type and another valve, Cat. No. 251005, U.S.N.M., come from Port Alfred (Coll. No. 1522). The type measures: Altitude, 2 mm.; length, 1.7 mm.

## Family ASTARTIDAE.

## Genus DIGITARIA Wood.

## DIGITARIA AFRICANA, new species.

Plate 45, fig. 4; plate 54, fig. 9.

Shell oval, bluish white. Umbones almost at the anterior end. Surface marked with moderately strong lines of growth and numerous, feebly expressed, radiating riblets which are about as wide as the spaces that separate them. In addition to this sculpture, the surface is marked by rather regularly spaced, strongly incised grooves, which pass obliquely across the lines of growth, bending upward toward the lunule and posteriorly toward the hinge line. The latter ones, however, terminate at the posterior ventral margin. The external sculpture is shown on the inner surface. Ventral border finely denticulated. The hinge is shown in our detailed figure.

Cat. No. 187184, U.S.N.M., contains the type, which comes from Port Alfred (Coll. No. 735). This is a left valve, and measures: Altitude, 3 mm.; length, 3.7 mm.

The hinge in the type, when compared with *Digitaria digitaria* Linnaeus, appears reversed; that is, our left valve corresponds with the armature of the right valve of that species.

## Family CHAMIDAE.

## Genus CHAMA Bruguiere.

## CHAMA GRYPHINA Lamarck(?).

Cat. No. 250994, U.S.N.M., contains a rather poor specimen, from Port Alfred, which may be this species (Coll. No. 1511).

## Family LUCINIDAE.

## Genus LUCINA Bruguiere.

## LUCINA GLOBOSA Forskål.

Cat. No. 98235, U.S.N.M., one valve collected by Dr. Holub, from Swartkop River, South Africa. Cat. No. 186964, U.S.N.M., two valves from Port Alfred (Coll. No. 335). Cat. No. 251020, U.S.N.M., an additional valve from the same place (Coll. No. 1537).

## Genus LORIPES Poli.

## LORIPES CLAUSUS Philippi.

Cat. No. 186961, U.S.N.M., one specimen from Port Alfred (Coll. No. 332).

## Genus PHACOIDES Blainville.

## PHACOIDES VALIDA Smith.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186963, two specimens (Coll. No. 334); Cat. No. 187187, two valves (Coll. No. 738); Cat. No. 227818, one specimen (Coll. No. 913).



**PHACOIDES DESPECTA** Smith.

Cat. No. 186962, U.S.N.M., one specimen from Port Alfred (Coll. No. 333).

**Family DIPLODONTIDAE.****Genus DIPLODONTA** Bronn.**DIPLODONTA AFRICANA**, new species.

Plate 47, fig. 5; plate 53, figs. 9, 10.

Shell small, donaciform, thin, semitranslucent. Exterior marked by numerous, regular and regularly spaced, slender, concentric threads, which are about as wide as the spaces that separate them. The incised lines appear as hydrophanous bands. In addition to the concentric markings, there are irregularly disposed, somewhat discontinuous, slender, radiating, hydrophanous lines. The entire external sculpture is equally visible within. The character of the hinge is shown in our detailed sketch.

The type, Cat. No. 251029, U.S.N.M., comes from Port Alfred (Coll. No. 1546). It measures: Altitude, 1.5 mm.; length, 2.2 mm. Cat. No. 251047, U.S.N.M., contains another specimen from the same locality (Coll. No. 1564).

**DIPLODONTA ALMO**, new species.

Plate 47, fig. 1; plate 54, fig. 2.

Shell very thin, semitranslucent, bluish white. Umbones median. Anterior and posterior dorsal margins sloping evenly. Surface marked with numerous, equal and equally spaced, slender, concentric threads which are about half as wide as the spaces that separate them. In addition to this, there are numerous, very fine, radiating striations. All the external markings are seen on the inner surface. The character of the hinge is shown in our detailed sketch.

The type, Cat. No. 251048, U.S.N.M., comes from Port Alfred (Coll. No. 1565). It measures: Altitude, 2.8 mm.; length, 3.5 mm.

**Genus FELANIELLA** Dall.**FELANIELLA ALFREDENSIS**, new species.

Plate 48, fig. 5; plate 53, figs. 7, 8.

Shell minute, bluish white, semitransparent, irregularly oval in outline. Umbones projecting anteriorly. Surface marked by fine incremental lines and very fine, somewhat divaricating, closely spaced, radiating striations. The character of the hinge is shown in our detailed sketch.

The type and another specimen of this species, Cat. No. 251044, U.S.N.M., come from Port Alfred (Coll. No. 1561). The type measures: Altitude, 1.5 mm.; length, 1.9 mm.

## Genus UNGULINA Daudin.

## UNGULINA ALFREDENSIS, new species.

Plate 43, figs. 1, 2; plate 54, figs. 1, 10.

Shell of varying outline, thin. Outer surfaces marked with irregular growth lines and numerous fine papillæ, which give the surface a shagreened appearance. The character of the hinge is shown in our detailed sketch.

There are one complete young specimen and three valves of this species, Cat. No. 187189, in the collection of the United States National Museum, from Port Alfred (Coll. No. 740). I figure the complete individual and the largest valve. The large specimen measures: Altitude, 12.5 mm.; length, 18 mm. The complete specimen measures: Altitude, 7 mm.; length, 8.6 mm.

## Family GALEOMMATIDAE.

## Genus SCINTILLA Deshayes.

## SCINTILLA TURTONI, new species.

Plate 45, fig. 3; plate 49, figs. 4, 5.

Shell very regularly oval, bluish white, semitranslucent. Umbones a little anterior to the middle. Outer surface marked by strong concentric lines of growth and exceedingly feeble, microscopic, radiating striations. The hinge is shown in our detailed figure.

The type and two additional valves, Cat. No. 249887, U.S.N.M., come from Port Alfred (Coll. No. 1159). It measures: Altitude, 6.3 mm.; length, 8.5 mm.

One of these loose valves with the type is somewhat larger, measuring: Altitude, 7 mm.; length, 9.5 mm.

There are two additional lots of this species in the United States National Museum, from Port Alfred, as follows: Cat. No. 187173, two valves (Coll. No. 722); Cat. No. 187174, one valve (Coll. No. 723).

## Family SPORTELLIDAE.

## Genus BASTEROTIA Mayer.

## BASTEROTIA TRICOSTALIS Sowerby.

Cat. No. 251051, U.S.N.M., contains a valve of this species from Port Alfred (Coll. No. 1568).

## Family LEPTONIDAE.

## Genus ERYCINA (Lamarck) Récluz.

## ERYCINA FIRMATA Gould.

*Lepton firmatus* GOULD, Proc. Boston Soc. Nat. Hist., vol. 8, p. 33, 1861.

Plate 43, figs. 3, 4; plate 49, figs. 6, 7.

Shell irregularly triangular, thin, bluish white, the umbones a little posterior to the middle; the posterior dorsal margin sloping

less abruptly; the anterior dorsal margin slightly rounded, the posterior less so and longer than the anterior; the ventral well rounded. The outer surface marked by numerous, rather strong, concentric lines of growth. The hinge is shown in our detailed figure.

Cat. No. 161, U.S.N.M., contains Gould's type of this species, which was collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. The type is a worn specimen, and measures: Altitude, 3.7 mm.; length, 4.8 mm.

*ERYCINA SUBRADIATA* Carpenter.

Plate 46, figs. 5, 6; plate 49, fig. 2.

Shell small, of almost oval outline, with the umbones almost central. The outer surface marked by very strong, irregularly-spaced, lines of growth, between which very fine striations are present, and numerous, fine, incised, radiating lines, which are strongest anteriorly and posteriorly. The hinge is shown in our detailed figure.

The type, Cat. No. 147, U.S.N.M., was collected by William Stimpson, on the North Pacific Exploring Expedition at Simons Bay, Cape of Good Hope. It measures: Altitude, 3 mm.; length, 3.6 mm.

*ERYCINA ALFREDENSIS*, new species.

Plate 43, figs. 7, 8; plate 50, figs. 1, 2.

Shell ovate, with the umbones decidedly posterior to the middle. Outer surface marked by fine lines of growth and numerous exceedingly minute tubercles, which lend the surface a shagreened effect. The character of the hinge is shown in our detailed sketch.

The type and another specimen, Cat. No. 187191, U.S.N.M., come from Port Alfred (Coll. No. 742). The type measures: Altitude, 3.9 mm.; length, 4.9 mm.

*ERYCINA IMA*, new species.

Plate 42, figs. 7, 8; plate 50, figs. 3, 4.

Shell small, oval. Outer surface polished, covered with an exceedingly thin periostracum which lends the shell an iridescent appearance. The umbones are slightly posterior to the middle. Outer surface marked by fine lines of growth only. The character of the hinge is shown in our detailed sketch.

The type and three other specimens, Cat. No. 187192, U.S.N.M., come from Port Alfred (Coll. No. 743). The type measures: Altitude, 1.7 mm.; length, 2.2 mm.

*ERYCINA CARIFA*, new species.

Plate 45, fig. 6; plate 50, figs. 5, 6.

Shell small, subcircular, slightly broader posteriorly than anteriorly, with the umbones almost median. Outer surface covered by a very thin periostracum which lends the shell an iridescent appear-

ance. The surface markings consist of somewhat irregularly spaced and developed fine lines of growth, and microscopic, radiating striations. The character of the hinge is shown in the detailed sketch.

The type, Cat. No. 251041, U.S.N.M., comes from Port Alfred (Coll. No. 1558). It measures: Altitude, 3 mm.; length, 3.5 mm.

*ERYCINA RIFACA*, new species.

Plate 39, fig. 3; plate 50, figs. 7, 8.

Shell very minute, subcircular, with the umbones median. Outer surface covered by an exceedingly thin periostracum which lends it an iridescent appearance. The outer surface is marked by exceedingly fine lines of growth only. The prodissoconch is strongly constricted at its junction with the succeeding portion of the shell. The character of the hinge is shown in the detailed figure.

The type and another specimen, Cat. No. 251068, U.S.N.M., come from Port Alfred (Coll. No. 1585). The type measures: Altitude, 1 mm.; length, 1.2 mm.

*ERYCINA*, species?

Cat. No. 251039, U.S.N.M., contains a single valve of a rather large triangular species, from Port Alfred, which we are unable to identify (Coll. No. 1556).

*ERYCINA*, species?

Cat. No. 187195, U.S.N.M., contains a single worn valve of another species from Port Alfred, which we are also unable to identify (Coll. No. 746).

Genus *BORNIA* Philippi.

*BORNIA FORTIDENTATA* Smith.

Plate 50, figs. 9, 10.

Cat. No. 186970, U.S.N.M., contains three specimens from Port Alfred (Coll. No. 343). Cat. No. 186971, U.S.N.M., contains three additional specimens of this species from the same locality (Coll. No. 344).

*BORNIA FARICA*, new species.

Plate 41, fig. 6; plate 51, figs. 1, 2.

Shell small, subcircular, thin, bluish white. Umbones decidedly anterior to the middle. Outer surface marked by numerous, closely spaced, concentric threads which are separated by grooves about as wide as the threads. The character of the hinge is shown in our detailed sketch.

The two cotypes, Cat. No. 251061, U.S.N.M., representing two opposite valves, come from Port Alfred (Coll. No. 1578). The larger of these measures: Altitude, 2.5 mm.; length, 3 mm.

**BORNIA ARFICA**, new species.

Plate 41, fig. 7; plate 51, fig. 4.

Shell broadly oval. Umbones decidedly anterior to the middle. Outer surface of the shell marked by numerous very closely spaced, fine, concentric threads, which are a little broader than the spaces that separate them, and numerous, very fine, microscopic, radiating striations. The character of the hinge is shown in our detailed sketch.

The type, Cat. No. 249894b, U.S.N.M., comes from Port Alfred (Coll. No. 1166b). It consists of a right valve, and measures: Altitude, 2.3 mm.; length, 2.8 mm.

**BORNIA (PYTHINA) ROTUNDATA** Deshayes.

Plate 51, figs. 5, 6.

Cat. No. 186969, U.S.N.M., contains two and one-half specimens of this species from Port Alfred (Coll. No. 342).

**BORNIA (PYTHINA) AFRICANA**, new species.

Plate 42, figs. 1, 2; plate 51, fig. 3.

Shell rather large, oval, slightly emarginate at the base, with the umbones decidedly posterior to the middle. The outer surface is marked by fine lines of growth and minute tubercles, which lend it a shagreened appearance. On the anterior end the shell has a few, ill-defined, raised, radiating threads.

The type and another valve, Cat. No. 187190, U.S.N.M., come from Port Alfred (Coll. No. 741). The type measures: Altitude, 9.5 mm.; length, 13.8 mm.

Three additional lots are in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 251011, a young specimen (Coll. No. 1528); Cat. No. 251038, one valve (Coll. No. 1555); Cat. No. 251056, one young valve (Coll. No. 1573).

**Genus ROCHEFORTIA** Vélain.**ROCHEFORTIA CONVEXA** Gould.

Plate 45, figs. 1, 2; plate 47, fig. 4, young; plate 51, figs. 7, 8, hinge.

*Kellia convexa* GOULD, Proc. Bost. Soc. Nat. Hist., vol. 8, p. 34, 1861.

Shell of suboval outline, wax yellow. Umbones almost median, with the dorsal margin slanting almost equally, anteriorly and posteriorly. Both ends equally rounded, and the basal margin gently curved. Entire surface marked by rather irregular, fine lines of growth. Hinge as shown in Plate 51, figs. 7, 8.

Gould's cotypes, Cat. No. 24244, U.S.N.M., two specimens, were collected by William Stimpson on the North Pacific Exploring Expe-



dition in 12 fathoms at the Cape of Good Hope. The larger of these, plate 45, figs. 1, 2, measures: Length, 4.2 mm.; altitude, 3 mm.; diameter, 2 mm.

*ROCHEFORTIA SIMILIS* Smith.

Plate 51, figs. 9, 10.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186967, one and one-half specimens (Coll. No. 339); Cat. No. 249886, two specimens (Coll. No. 1158); Cat. No. 251052, two valves (Coll. No. 1569).

*ROCHEFORTIA NATALENSIS* Smith.

Plate 52, figs. 1, 2.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186185, one valve (Coll. No. 736); Cat. No. 249890, two specimens (Coll. No. 1162); Cat. No. 249891, two specimens (Coll. No. 1163).

*ROCHEFORTIA ENORA*, new species.

Plate 45, fig. 5; plate 52, figs. 3, 4.

Shell oval, rather thick, with the umbones almost median. The surface marked by somewhat irregular, slender, closely spaced lines of growth, and weak, very fine, radiating striations. The character of the hinge is shown in the detailed sketch.

The type, Cat. No. 251040, U.S.N.M., comes from Port Alfred (Coll. No. 1557). It measures: Altitude, 3 mm.; length, 3.8 mm.

*ROCHEFORTIA ELSA*, new species.

Plate 41, fig. 3; plate 52, figs. 5, 6.

Shell broadly oval, minute, very thin, semitranslucent, the umbones being situated at the anterior end. Outer surface marked by numerous, very fine, concentric lines of growth, which appear as very slender threads. No radiating sculpture is apparent. The character of the hinge is shown in our detailed sketch.

The type, Cat. No. 251045, U.S.N.M., comes from Port Alfred (Coll. No. 1562). It measures: Altitude, 1.4 mm.; length, 1.8 mm.

*ROCHEFORTIA MILDA*, new species.

Plate 47, fig. 6; plate 52, figs. 9, 10.

Shell small, broadly oval, covered by an exceedingly thin periostracum, which lends it an iridescent appearance. Umbones slightly anterior to the middle. The posterior margin slightly truncated; the anterior well rounded. Surface marked by numerous very closely spaced, slender, concentric threads, which are a little wider than the spaces that separate them, and numerous very fine radiating axial

threads, which are best pronounced on the posterior portion of the shell. The character of the hinge is shown in our detailed sketch.

The type and another valve, Cat. No. 249894, U.S.N.M., come from Port Alfred (Coll. No. 1166). The type measures: Altitude, 2.2 mm.; length, 2.5 mm.

**ROCHFORTIA HELENA**, new species.

Plate 42, figs. 3, 4; plate 47, fig. 2; plate 52, figs. 7, 8.

Shell minute, of somewhat irregular cuneate outline, thin, semi-translucent. Umbones a little posterior to the anterior margin. Outer surface marked by exceedingly fine, concentric threads only. The character of the hinge is shown in our detailed sketch.

The type and another specimen of this species, Cat. No. 187193, U.S.N.M., come from Port Alfred (Coll. No. 744). The type measures: Altitude, 1.2 mm.; length, 1.5 mm.

Cat. No. 251019, U.S.N.M. contains three additional valves of this species from the same place (Coll. No. 1536).

**ROCHFORTIA IO**, new species.

Plate 39, fig. 5; plate 53, figs. 5, 6.

Shell very minute, of irregular cuneate outline. Prodissoconch marked by fine radiating striations. The succeeding portion, which is separated by a slight constriction from the prodissoconch, is marked by numerous, rather strong, concentric threads, which are about as wide as the spaces that separate them. The character of the hinge is shown in our detailed sketch.

The type and two other specimens, Cat. No. 251043, U.S.N.M., come from Port Alfred (Coll. No. 1560). The type measures: Altitude, 0.9 mm.; length, 1.1 mm.

**ROCHFORTIA FARMA**, new species.

Plate 48, fig. 2; plate 53, figs. 1, 2.

Shell small, oval, covered with a very thin yellowish periostracum, with the umbones about one-third of the entire length of the shell posterior to the anterior margin. Surface marked with rather coarse and somewhat irregular lines of growth, and numerous, fine, radiating striations which are of varying strength and irregular spacing. The character of the hinge is shown in our detailed figure.

The type and another valve, Cat. No. 249892, U.S.N.M., come from Port Alfred (Coll. No. 1164). The type measures: Altitude, 1.9 mm.; length, 2.5 mm.

**Genus LASEA** Leach.

**LASEA TURTONI**, new species.

Plate 42, figs. 9, 10; plate 53, figs. 3, 4.

Shell irregularly, broadly oval, white, with the early portion and the hinge suffused with rose purple. The umbones are about opposite the

middle, but the shell is much more inflated posterior to the umbones than anterior. Outer surface marked with irregularly spaced, rather strong, incremental lines, and exceedingly fine papillations, which lend the surface a shagreened appearance. The character of the hinge is shown in our detailed figure.

The type and two valves, Cat. No. 186968, U.S.N.M., come from Port Alfred (Coll. No. 341). The type measures: Altitude, 3.3 mm.; length, 4.1 mm.

There are four additional lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 249888, three specimens (Coll. No. 1160); Cat. No. 251025, a young valve (Coll. No. 1542); Cat. No. 251042, three specimens (Coll. No. 1559); Cat. No. 251058, one young valve (Coll. No. 1575).

This species is probably what has been reported from South Africa as *Lasea australis* Sowerby. It differs from it in general outline, and in being a much thinner shell of much finer external sculpture. It is likewise smaller, the Australian species being very coarse in every way.

### Family KELLIELLIDAE.

Genus ALIGENA H. C. Lea.

ALIGENA OVALIS Smith.

Cat. No. 186959, U.S.N.M., one specimen from Port Alfred (Coll. No. 329).

### Family CARDIIDAE.

Genus CARDIUM Lamarck.

CARDIUM TURTONI Sowerby.

Cat. No. 186934, U.S.N.M., two specimens from Port Alfred (Coll. No. 304).

Genus PAPYRIDEA Swainson.

PAPYRIDEA (FULVIA) NATALENSIS Sowerby.

Cat. No. 186935, U.S.N.M., two specimens from Port Alfred (Coll. No. 305). Cat. No. 251003, U.S.N.M., contains a very young valve from the same locality (Coll. No. 1520).

### Family VENERIDAE.

Genus DOSINIA Scopoli.

DOSINIA HEPATICA Lamarck.

There are four lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186936, two specimens (Coll. No. 306); Cat. No. 186961a, one valve (Coll. No. 332a); Cat. No. 187178, one valve (Coll. No. 729); Cat. No. 251015, one specimen (Coll. No. 1532).

Genus *TIVELA* Link.*TIVELA COMPRESSA* Sowerby.

Cat. No. 19835, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at Simons Bay. Cat. No. 186938, U.S.N.M., three valves from Port Alfred (Coll. No. 308).

*TIVELA ALUCINANS* Sowerby.

Cat. No. 43179, U.S.N.M., one specimen from the Cape of Good Hope.

Genus *SUNETTA* Link.*SUNETTA OVALIS* Sowerby.

Cat. No. 186940, U.S.N.M., seven valves from Port Alfred (Coll. No. 310).

Genus *CIRCE* Schumacher.*CIRCE ALFREDENSIS*, new species.

Plate 46, figs. 3, 4.

Shell oval, white or pale brown flecked with rust brown. Umbones about one-third of the length of the shell posterior to the anterior margin. Surface marked by strong radiating ribs which increase in strength from the umbones toward the ventral margin. On the posterior and anterior margins they become divaricate. There are 30 of these ribs on the valve. The spaces separating these radiating ribs are a little less in width than the ribs, and are marked with concentric riblets. These riblets extend up on the sides of the ribs but do not seem to cross their summits. The character of the hinge is shown in our detailed sketch.

The type and another valve, Cat. No. 189441, U.S.N.M., come from Port Alfred (Coll. No. 311). The type measures: Altitude, 11.5 mm.; length, 16 mm.

Genus *CHIONE* Mühlfeld.*CHIONE*, species?

Cat. No. 187180, U.S.N.M., two valves, young specimens of a species of this genus, too poor to be specifically determined, from Port Alfred (Coll. No. 731).

Genus *ANOMALOCARDIA* Schumacher.*ANOMALOCARDIA ALFREDENSIS*, new species.

Plate 44, figs. 3, 4.

Shell inflated, heavy, irregularly triangular, flesh colored marked with radiating, zigzag lines of rust brown. Outer surface polished, marked by concentric lines of growth and somewhat crinkly, radiating striations. The character of the hinge is shown in our detailed sketch.

The type and another specimen, Cat. No. 186939, U.S.N.M., come from Port Alfred (Coll. No. 309). The type measures: Altitude, 25 mm.; length, 31 mm.

Cat. No. 251022, U.S.N.M., contains two additional valves from the same locality (Coll. No. 1539).

Genus *ANTIGONA* Schumacher.

*ANTIGONA VERRUCOSA* Linnaeus.

Cat. No. 98233, U.S.N.M., one specimen from Port Elizabeth. Cat. No. 186937, U.S.N.M., two specimens from Port Alfred (Coll. No. 307).

*ANTIGONA* (?), species ?

Cat. No. 187194, U.S.N.M., seven valves, from Port Alfred (Coll. No. 745), nepionic shells of this genus too young to be specifically determined with the material at hand.

Genus *PAPHIA* Bolten.

*PAPHIA DISRUPTA* Sowerby.

The United States National Museum has three lots of this species from the Cape of Good Hope, as follows: Cat. No. 17645, three specimens; Cat. No. 32034, five specimens; Cat. No. 76484, three specimens. In addition to this there are three specimens from Albany, Cat. No. 98048, and three additional lots from Port Alfred, as follows: Cat. No. 186942, one specimen (Coll. No. 312); Cat. No. 251023, one specimen (Coll. No. 1540); Cat. No. 251024, one specimen (Coll. No. 1541).

Genus *VENERUPIS* Lamarck.

*VENERUPIS*, species ?

The United States National Museum contains two lots of *Venerupis*, which are too poor to be specifically determined, all from Port Alfred, as follows: Cat. No. 187172, one specimen (Coll. No. 721); Cat. No. 251026, one valve (Coll. No. 1543).

Family *PETRICOLIDAE*.

Genus *PETRICOLA* Lamarck.

*PETRICOLA PONSONBYI* Sowerby.

Cat. No. 32034a, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 98042, U.S.N.M., two specimens from Albany. Cat. No. 186943, U.S.N.M., two specimens from Port Alfred (Coll. No. 313). Cat. No. 187188, U.S.N.M., one specimen from the same locality (Coll. No. 739).

*PETRICOLA*, species ?

Cat. No. 187182, U.S.N.M., a valve of a specimen too young to be determined positively, from Port Alfred (Coll. No. 733).



## Family TELLINIDAE.

## Genus TELLINA Linnaeus.

## TELLINA VIDAENSIS Sowerby.

Cat. No. 66, U.S.N.M., four specimens collected by William Stimpson on the North Pacific Exploring Expedition in False Bay.

## TELLINA ALBINELLA ALFREDENSIS, new subspecies.

Plate 46, figs. 7, 8.

Shell similar in outline and coloration to the rose-colored form of *T. albinella* Lamarck, but differing from it in being much heavier, and in having the angulated posterior dorsal area much narrower, which renders the posterior end of the shell much more pointedly beaked. The radiating sculpture is also much coarser than in *albinella*.

Cat. No. 186948, U.S.N.M., contains the type which comes from Port Alfred (Coll. No. 318). The type measures: Length, 46.8 mm.; altitude, 25.5 mm. Cat. No. 249859, U.S.N.M., contains another valve from the same locality (Coll. No. 1131).

## TELLINA NATALENSIS Krauss.

Cat. No. 186949, U.S.N.M., one valve from Port Alfred (Coll. No. 319).

## TELLINA PONSONBYI Sowerby.

Three lots of this species are in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186950, two specimens (Coll. No. 320); Cat. No. 249860, three specimens (Coll. No. 1132); Cat. No. 249885, three very young specimens (Coll. No. 1157).

## TELLINA TRIANGULARIS Chemnitz.

Cat. No. 98046, U.S.N.M., one specimen from Albany. In addition to this, there are two lots in the collection of the United States National Museum from Port Alfred, as follows: Cat. No. 186951, two specimens (Coll. No. 321); Cat. No. 251031, one very young valve (Coll. No. 1548).

## TELLINA REGULARIS Smith.

Cat. No. 186952, U.S.N.M., three specimens from Port Alfred (Coll. No. 322).

## TELLINA, species?

Cat. No. 251037, U.S.N.M., is a young valve of a *Tellina* which I am unable to identify, from Port Alfred (Coll. No. 1554).

## TELLINA, species?

Cat. No. 251050, U.S.N.M., is a valve from Port Alfred, belonging to the section of rounded-valve *Tellinas* having radiating red bands, which I am unable to identify. On account of its worn condition I refrain from describing it as new (Coll. No. 1367).

## Genus METIS H. and A. Adams.

## METIS ORBICULARIS Sowerby.

Cat. No. 187170, U.S.N.M., one valve from Port Alfred (Coll. No. 717).

## Genus MACOMA Leach.

## MACOMA LITTORALIS Krauss.

Cat. No. 186954, U.S.N.M., three and one-half specimens from Port Alfred (Coll. No. 324).

## MACOMA AFRICANA Sowerby.

Cat. No. 186955, U.S.N.M., two specimens from Port Alfred (Coll. No. 325). Cat. No. 249862, U.S.N.M., contains two additional specimens from the same locality (Coll. No. 1134).

## Family SEMELIDAE.

## Genus SEMELE Schumacher.

## SEMELE CAPENSIS Smith.

Cat. No. 249861, U.S.N.M., contains six valves of this species, all from Port Alfred (Coll. No. 1133).

## Genus ABRA (Leach) Lamarek

## ABRA AFRICANA, new species.

Plate 45, fig. 7; plate 49, figs. 8, 9.

Shell small, bluish white, covered by a very thin, yellow periostracum. The umbones fall considerably anterior to the middle. The anterior dorsal margin slopes more abruptly than the posterior dorsal. The ventral is evenly, gently curved. By transmitted light the valves show microscopic, closely spaced, radiating striations and fine lines of growth. The hinge is shown in our detailed figure.

The type, Cat. No. 249863, U.S.N.M., comes from Port Alfred (Coll. No. 1135). It measures: Altitude, 3.7 mm.; length, 5 mm.

## Genus THEORA H. and A. Adams.

## THEORA ALFREDENSIS, new species.

Plate 45, fig. 8; plate 49, fig. 3.

Shell elongate-oval, polished, thin, semitranslucent. Anterior dorsal margin sloping much more abruptly than the posterior; ventral margin evenly rounded. The entire surface of the shell is marked by exceedingly fine, microscopic, radiating striations, which are best shown by transmitted light, and coarser lines of growth. The hinge is shown in our detailed figure.

The type, Cat. No. 251032, U.S.N.M., comes from Port Alfred (Coll. No. 1549). It measures: Altitude, 5.5 mm.; length, 9.2 mm.

## Family PSAMMOBIIDAE.

## Genus GASTRANA Schumacher.

## GASTRANA ABILDGAARDIANA Spengler.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186947, one specimen (Coll. No. 317); Cat. No. 186958, a very young valve (Coll. No. 328); Cat. No. 249872, four young valves (Coll. No. 1144).

## Genus PSAMMOBIA (Lamarck) Bowdich.

## PSAMMOBIA BURNUPI Sowerby.

Cat. No. 187169, U.S.N.M., three valves from Port Alfred (Coll. No. 716).

## PSAMMOBIA, species?

Cat. No. 187169*a*, U.S.N.M., contains a valve of a *Psammobia* which I am unable to reconcile with any of the known species from South Africa, but which is too poor to be identified, (Coll. No. 716). It comes from Port Alfred.

## Genus PSAMMOTELLINA Fischer.

## PSAMMOTELLINA CAPENSIS Sowerby.

Cat. No. 127046, U.S.N.M., three specimens from Port Elizabeth. In addition to these, there are six lots in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186953, one specimen and four valves (Coll. No. 323); Cat. No. 249864, seven specimens (Coll. No. 1136); Cat. No. 249865, one specimen (Coll. No. 1137); Cat. No. 249866, one specimen (Coll. No. 1138); Cat. No. 249867, one valve (Coll. No. 1139); Cat. No. 251055, one valve (Coll. No. 1572).

## Family DONACIDAE.

## Genus DONAX Linnaeus.

## DONAX SERRA Chemnitz.

Cat. No. 84, U.S.N.M., three specimens collected by William Stimpson on the North Pacific Exploring Expedition at the Cape of Good Hope. Cat. No. 76087, U.S.N.M., two valves from the Cape of Good Hope. Cat. No. 97998, U.S.N.M., two specimens from Albany. Cat. No. 98234, U.S.N.M., one specimen from Port Elizabeth. Cat. No. 186956, U.S.N.M., one specimen from Port Alfred (Coll. No. 326).

## DONAX BERTINI Pilsbry.

Cat. No. 160860, U.S.N.M., one specimen from South Africa. Cat. No. 251035, U.S.N.M., contains two valves from Port Alfred (Coll. No. 1552).

**DONAX SORDIDUS** Hanley.

Cat. No. 186957, U.S.N.M., one and one-half specimens from Port Alfred (Coll. No. 327).

**DONAX BIPARTITUS** Pilsbry.

Cat. No. 160861, U.S.N.M., one specimen from South Africa.

**DONAX SIMPLEX** Sowerby.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187176, one specimen (Coll. No. 725); Cat. No. 251027, one valve (Coll. No. 1544); Cat. No. 251034, one specimen and one valve (Coll. No. 1551).

**DONAX BURNUPI** Sowerby.

Cat. No. 187175, U.S.N.M., one valve from Port Alfred (Coll. No. 724). Cat. No. 251028, U.S.N.M., one valve (Coll. No. 1545). Cat. No. 251036, U.S.N.M., one valve (Coll. No. 1553).

Family **SOLENIDAE**.Genus **SOLEN** Linnaeus.**SOLEN ALFREDENSIS**, new species.

Plate 40, figs. 1, 2.

Shell subcylindric, laterally compressed, gaping anteriorly and posteriorly, obliquely truncated anteriorly, well rounded posteriorly. The valves have a very strong constriction immediately posterior to the anterior margin. They are marked with fine lines of growth only.

The type and another specimen, Cat. No. 227816, U.S.N.M., come from Port Alfred (Coll. No. 911). The type measures: Altitude, 15 mm.; length, 96.5 mm.; diameter, 11 mm.

**SOLEN CAPENSIS** Fischer.

There are three lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 186960, one specimen (Coll. No. 330); Cat. No. 249858, three specimens (Coll. No. 1130); Cat. No. 251021, two young specimens (Coll. No. 1538).

Family **MACTRIDAE**.Genus **SCHIZODESMA** Gray.**SCHIZODESMA SPENGLERI** Linnaeus.

Cat. No. 86, U.S.N.M., one specimen collected by William Stimpson on the North Pacific Exploring Expedition at False Bay, Cape of

Good Hope. Cat. No. 17496, U.S.N.M., one specimen from the Cape of Good Hope. Cat. No. 186944, U.S.N.M., one specimen from Port Alfred (Coll. No. 314).

Genus *EASTONIA* Gray.

*EASTONIA AFRICANA*, new species.

Plate 43, figs. 5, 6.

Shell broadly oval, thin. Umbones about one-third of the length of the shell posterior to the anterior margin. Surface marked by many slender, raised, radiating threads which are less strong on the anterior portion than on the posterior and also much more closely spaced here than on the posterior part, except the extreme posterior portion, on which they are entirely absent. The spaces between these ribs are concaved and marked by very slender, irregular, slanting lines which give this portion of the shell a crinkly appearance. In addition to this sculpture, the whorls are marked by numerous feeble lines of growth.

The type, Cat. No. 186946, U.S.N.M., comes from Port Alfred (Coll. No. 316), and measures: Length, 36 mm.; altitude, 30 mm. This is probably what has been reported as *Standella solandri* Gray, a species occurring in the Moluccas. It differs from that species in being shorter and higher and in having many more ribs.

Genus *MACTRA* Linnaeus.

*MACTRA AEQUISULCATA* Sowerby.

Cat. No. 128350, U.S.N.M., one specimen from South Africa.

*MACTRA ADANSONI* Philippi.

There are four lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187166, two specimens (Coll. No. 713); Cat. No. 187167, one valve (Coll. No. 714); Cat. No. 251016, two additional valves (Coll. No. 1533); Cat. No. 251033, a very young valve (Coll. No. 1550).

*MACTRA ALFREDENSIS*, new species.

Plate 44, figs. 6, 7

Shell oval, compressed. Anterior dorsal margin passing in an almost straight line from the umbones to the extreme anterior portion, and then curving evenly to the evenly curved base. Posterior dorsal margin more feebly curved. Two radiating raised lines pass obliquely backward from the umbones; the second of these is a little more distant from the first than that is from the dorsal margin. The space inclosed by them is marked by numerous indistinct reticula-



tions. Outer surface of the entire shell marked by rather coarse, concentric lines of growth and numerous, exceedingly fine, white, evenly spaced, radiating striations.

Cat. No. 186945, U.S.N.M., contains four valves of this species from Port Alfred (Coll. No. 315). The one selected as type is not quite a mature specimen, measuring: Length, 41 mm.; altitude, 29 mm.

Genus *LUTRARIA* Lamarck.

*LUTRARIA CAPENSIS* Deshayes.

There are three lots of this species in the collection of the United States National Museum, from Port Alfred, as follows: Cat. No. 187168, two specimens (Coll. No. 715); Cat. No. 249873, one valve (Coll. No. 1145); Cat. No. 251030, another valve (Coll. No. 1547).

Family *SAXICAVIDAE*.

Genus *SAXICAVA* Bellevue.

*SAXICAVA ARENACEA* Smith.

There are eight lots of this species in the collection of the United States National Museum, all from Port Alfred, as follows: Cat. No. 187179, one specimen and four valves (Coll. No. 730); Cat. No. 249874, five valves (Coll. No. 1146); Cat. No. 249875, seven valves (Coll. No. 1147); Cat. No. 249876, four young specimens (Coll. No. 1148); Cat. No. 249879, two young specimens (Coll. No. 1151); Cat. No. 251046, one valve (Coll. No. 1563); Cat. No. 251054, one valve (Coll. No. 1571); Cat. No. 251057, two valves (Coll. No. 1574).

*SAXICAVA LIRATA* Smith.

Cat. No. 251053, U.S.N.M., one specimen from Port Alfred (Coll. No. 1570).

Family *GASTROCHAENIDAE*.

Genus *GASTROCHAENA* Spengler.

*GASTROCHAENA*, species ?

Cat. No. 249871, U.S.N.M., contains one worn valve belonging to this genus, from Port Alfred (Coll. No. 1143). It is too poor to be properly identified.

Family *PHOLADIDAE*.

Genus *PHOLAS* Linnaeus.

*PHOLAS ALFREDENSIS*, new species.

Plate 44, figs. 1, 2.

Shell elongate-ovate, decidedly beaked anteriorly, marked by numerous very closely spaced, low lamellae and fine radiating riblets

which are closely spaced at the anterior end, becoming gradually more diffused posterior to the umbones. The junction of the radiating riblets with the lamellae, form slender cusps. Dorsal callus thick, strong, and decidedly reflected.

The type and two valves of this species (Cat. No. 186965, U.S.N.M., come from Port Alfred (Coll. No. 337). The type measures: Length, 41 mm.; altitude, 12 mm. Another specimen, Cat. No. 187177, U.S.N.M., comes from the same place (Coll. No. 728). This specimen is much stouter than the other, measuring: Length, 35 mm.; altitude, 17 mm.

This is the species which has been listed from South Africa as *Pholas fragilis* Sowerby, which is a Philippine shell coming from Bassy, Samar Island. I have material from the type-locality and find that this species differs from the present in being much thinner and much more strongly and distinctly sculptured, and altogether more elegant.

## BIBLIOGRAPHY.

In this bibliography only such works have been cited as are absolutely necessary to an understanding of the nomenclature of the South African mollusks.

ABRAHAM, P. S.

1877. Revision of the Authobranchiate Nudibranchiate Mollusca, with descriptions or notices of forty-one hitherto undescribed species. Proc. Zool. Soc. of London, pp. 196-269.

ADAMS, ARTHUR.

1850. An arrangement of Stomatellidae, including the characters of a new genus, and of several new species. Proc. Zool. Soc., London, pp. 29-40.
1850. Monographs of Cyclostrema, Marryatt, and Separatista, Gray; two genera of gasteropodous mollusks. Proc. Zool. Soc., London, pp. 41-45.
1850. A monograph of Phos, a genus of gasteropodous mollusca. Proc. Zool. Soc., London, pp. 152-155.
1851. Catalogue of the species of Nassa, a genus of Gasteropodous Mollusca belonging to the family Buccinidae, in the collection of Hugh Cuming, Esq., with the description of some new species. Proc. Zool. Soc., London, pp. 94-114.
1851. Descriptions of fifty-two new species of the genus Mitra, from the Cumingian Collection. Proc. Zool. Soc., London, pp. 132-141.
1851. On the animal of Liotia; with descriptions of new species of Delphinula and Liotia from the Cumingian collection. Ann. Mag. Nat. Hist., ser. 2, vol. 7, pp. 332-333.
1854. Descriptions of thirty-nine new species of shells, from the collection of Hugh Cuming, Esq. Proc. Zool. Soc., London, pp. 130-138.
1854. Descriptions of twenty-seven new species of shells from the collection of Hugh Cuming, Esq. Proc. Zool. Soc., London, pp. 311-317.

ADAMS, ARTHUR and REEVE, LOVELL.

1850. The zoology of the voyage of H. M. S. *Samarang*. Mollusca, pp. i-x, 1-87.

ADAMS, HENRY.

1860. Description of a new genus and species of mollusk. Proc. Zool. Soc., London, pp. 450-451.

ANTON, H. E.

1839. Verzeichniss der Conchylien, pp. i-xvi, 1-110.

BERGH, R.

1866-67. Bidrag til en Monographi af Pleurophyllidierne. Naturhistorisk Tidsskrift, ser. 3, vol. 4, pp. 1-80.

1907. The Opisthobranchiata of South Africa. Marine Investigations in South Africa, vol. 5, pt. 1. Trans. South African Philos. Soc., vol. 17, pp. 1-144.

BLAINVILLE, H. DE.

1825. Dictionnaire des Sciences Naturelles, vol. 36, pp. 1-560.

1825. Dictionnaire des Sciences Naturelles, vol. 38, pp. 1-528.

1832. Des especes recentes et fossiles des genres Pourpre, Ricinule, Licorne et Concholepas de M. de Lamarck. Nouv. Ann. Mus. Hist. Nat., vol. 1, pp. 189-263.

BORN, I.

1780. Testacea Musei Caesarei Vindobonensis.

BRUGUIERE, J. G.

1789-92. Encyclopedie Methodique. Histoire naturelle des Vers, pp. 1-758.

BUCQUOY, E., DAUTZENBERG, P., and DOLLFUS, G.

1882-1898. Mollusques Marins de Roussillon.

BURNE, R. H.

1906. Notes on the anatomy of South African Aplysiidae, with descriptions of two new species. Proc. Malac. Soc., London, vol. 7, pp. 51-58.

CHEMNITZ, J. H.

1786. Neues systematisches Conchylien-Cabinet, vol. 9, Abth. 1, pp. 1-151.

COLLINGE, W. E.

1902. Description of a new species of Onchidium from South Africa. Journ. Malac., vol. 9, p. 17.

DESHAYES, G. P.

1853. Catalogue of the Conchifera or Bivalve Shells in the collection of the British Museum. Pt. 1, pp. 1-216.

1859. A general review of the genus Terebra, and a description of new species. Proc. Zool. Soc., London, pp. 270-321.

DUNKER, W.

1844-45. In Reeve's monograph of the genus Mitra in "Conchologia Iconica," vol. 2.

1845. In Reeve's monograph of the genus Murex in "Conchologia Iconica," vol. 3.

1845-51. In Philippi's "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien."

1846. Diagnoses Molluscorum novorum. Zeitschr. fur Malakozool., pp. 108-112.

1847. In Philippi's "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien," vol. 2, p. 67.

1848. In Krauss' "Sudafricanischen Mollusken," p. 94.

1858-70. Novitates Conchologicae, pp. 1-144.

1864. Fünf neue Mollusken. Malakozool. Blät., pp. 99-102.

ELIOT, C. N. E.

1905. On some Nudibranchs from the Pacific, including a new genus, Chromodoridella. Proc. Mal. Soc. London, vol. 6, pp. 220-238.

EUTHYME, LE FRERE.

1855. Description de Quelques Mollusques Exotiques Nouveaux. Bull. Soc. Malac., France, vol. 2, pp. 237-260.

1889. Description de Quelques Especes Nouvelles de la Faune Marine Exotique. Bull. Soc. Malac. France, vol. 6, pp. 259-282.

FISCHER, PAUL.

1887. Manuel de Conchyliologie, pp. i-xxiv, 1-1369.

## GASKOIN, J. S.

1835. Descriptions of new species of *Cypraea*. *Proc. Zool. Soc., London*, pp. 198-204.

1853. On the genus *Pachy bathron*, and on some new species of *Marginella*. *Ann. Mag. Nat. Hist., ser. 2, vol. 11*, pp. 356-360.

## GILCHRIST, J. D. F.

1899. The genus *Paraplysia* with description of a new species. *Trans. South African Philos. Soc., vol. 11*, pp. 121-124.

## GMELIN, G. F.

1892. *Caroli Linne's Systema Naturae*, vol. 1, pt. 6, pp. 3021-3909.

## GOULD, A. A.

1859. Descriptions of shells collected by the North Pacific Exploring Expedition. *Proc. Bost. Soc. Nat. Hist., vol. 7*, pp. 40-45.

1859. Descriptions of new species of shells brought home by the North Pacific Exploring Expedition. *Proc. Bost. Soc. Nat. Hist., vol. 7*, pp. 138-142.

1860. Descriptions of new shells collected by the United States North Pacific Exploring Expedition. *Proc. Bost. Soc. Nat. Hist., vol. 7*, pp. 323-340.

1860. Descriptions of new shells collected by the North Pacific Exploring Expedition. *Proc. Bost. Soc. Nat. Hist., vol. 7*, pp. 382-389.

1860. Descriptions of shells collected by the North Pacific Exploring Expedition. *Proc. Bost. Soc. Nat. Hist., vol. 7*, pp. 400-409.

1861. Descriptions of shells collected by the North Pacific Exploring Expedition. *Proc. Bost. Soc. Nat. Hist., vol. 8*, pp. 14-40.

## GRAY, J. E.

1825. Monograph on the *Cypraeidae*, a family of Testaceous Mollusca. *Zool. Journ., vol. 1, art. 62*, pp. 489-518.

1828. Monograph on the *Cypraeidae*, a family of Testaceous Mollusca. *Zool. Journ., vol. 3*, pp. 567-576.

1828. *Spicilegia Zoologica*; or original figures and short systematic descriptions of new and unfigured animals.

1839. Molluscan animals and their shells. *Zoology of Captain Beechey's Voyage*, pp. 101-155.

1846-47. In Reeve's monograph of the genus *Bullia* in "*Conchologia Iconica*," vol. 3.

## HANLEY, S.

1840. The Young Conchologist's book of species. *Univalves*. pp. i-viii, pp. 1-146.

1842-1856. An illustrated and descriptive catalogue of recent bivalve shells. pp. i-xviii, pp. 1-392.

1856. Descriptions of four new species of *Kelliadae* in the collection of Hugh Cuming, Esq. *Proc. Zool. Soc., London*, pp. 340-341.

1859. Descriptions of new univalve shells from the collection of H. Cuming and Sylvanus Hanley. *Proc. Zool. Soc., London*, pp. 429-431.

## HIGGINS, E. T.

1868. Descriptions of six new species of shells. *Proc. Zool. Soc., London*, pp. 178-180.

## HINDS, R. B.

1843. On new species of shells collected by Sir Edward Belcher, C. B. *Proc. Zool. Soc., London*, pp. 17-19.

1843. On new species of *Pleurotoma*, *Clavatula*, and *Mangilia*. *Proc. Zool. Soc., London*, pp. 36-46.

1843. On new species of *Cancellaria*. *Proc. Zool. Soc., London*, pp. 47-49.

1843. On new species of *Corbula* and *Potamomya*. *Proc. Zool. Soc., London*, pp. 55-59.

## HINDS, R. B.—Continued.

1843. On new species of *Nucula*, from the collections of Sir Edward Belcher, C. B., and H. Cuming, Esq. *Proc. Zool. Soc., London*, pp. 97-101.
1843. On new species of *Terebra*. *Proc. Zool. Soc., London*, pp. 149-159.
1843. Descriptions of new shells, collected during the voyage of the *Sulphur*, and in Mr. Cuming's late visit to the Philippines. *Proc. Zool. Soc., London*, pp. 149-168.
1844. Descriptions of new species of *Triton*, *Solarium*, and *Corbula*. *Proc. Zool. Soc., London*, pp. 21-26.
1844. Descriptions of *Marginellae* collected during the voyage of H. M. S. *Sulphur*, and by H. Cuming, Esq. *Proc. Zool. Soc., London*, pp. 72-77.

## HOYLE, W. E.

1904. *Sepia burnupi* n. sp. from Natal. *Journ. Conchol. (Leeds)*, vol. 11, No. 1, pp. 27-28.

## HWASS, C. H.

1792. In "Encyclopedie Methodique," vol. 6, p. 621.

## JAMESON, H. L.

1901. On the identity and distribution of the Mother-of-Pearl Oysters; with a revision of the subgenus *Margaritifera*. *Proc. Zool. Soc., London*, vol. 1, pp. 372-393.

## KIENER, L. C.

- 1834 and 1841. Monograph of the genus *Buccinum*. *Species General et Iconographie des Coquilles Vivantes*, pp. 1-108.
- 1834 and 1841. Monograph of the genus *Marginella*. *Species General et Iconographie des Coquilles Vivantes*, pp. 1-44.
- 1844-45. Monograph of the genus *Cypraea*. *Species General et Iconographie des Coquilles Vivantes*, pp. 1-166.
- 1846-50. Monograph of the genus *Conus*. *Species General et Iconographie des Coquilles Vivantes*, pp. 1-379.

## KING, WILLIAM.

1871. On *Agulhasia davidsonii*, a new Palliobranchiate genus and species. *Ann. Mag. Nat. Hist., ser. 4*, vol. 7, pp. 109-112.

## KOBELT, WILLIAM.

1898. Monograph on the genus *Cerithium* in Martini-Chemnitz' "Conchylien-Cabinet."

## KOCH, C. H.

1845. In Philippi's "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien," p. 3 (or 37).

## KRAUSS, FERD.

1844. In Martini-Chemnitz' *Auriculacea* in "Conchylien-Cabinet," vol. 1, 16.
1847. On *Littorina*. Philippi's "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien," vol. 2, pp. 195-203.
1848. Die Südafrikanischen Mollusken, pp. 1-140.
1852. Neue Kap'sche Mollusken. Wiegmann's "Archiv Naturg.," pp. 29-40.
1858. In monograph on *Buccinum* in Martini-Chemnitz' "Conchylien Cabinet," vol. 3, 1a, p. 85.

## KUSTER, H. C.

1844. Monograph on the *Auriculacea* in Martini-Chemnitz' "Conchylien Cabinet," vol. 1, pt. 16.
1848. In Krauss' "Südafrikanischen Mollusken," p. 26.
1858. Die Gattungen *Buccinum*, *Purpura*, *Concholepas* und *Monoceros*. Martini-Chemnitz' "Conchylien Cabinet," pp. 1-229.

## LAMARCK, J. B.

- 1818-19, 1822. *Histoire naturelle des Animaux sans Vertebres*, vols. 5-7.



LINNAEUS, C.

1758. *Systema Naturae*, vol. 1, ed. 10, pp. 1-824.

1767. *Systema Naturae*, vol. 1, pt. 2, ed. 12, pp. 533-1327.

MARRAT, F. P.

1871. On a new species of *Marginella* from South Africa. *Ann. Mag. Nat. Hist.*, ser. 4; vol. 7, p. 141.

1871. Monograph of the genus *Oliva*. Sowerby's "Thesaurus Conchyliorum," pp. 1-46.

1877. Description of new species. *Journ. Conch. (Leeds)*, vol. 1, p. 204.

MARTENS, E. VON.

1874. Ueber einige südafrikanische Mollusken. *Jahrb. Deutsch. Malak. Gesell.*, vol. 1, pp. 119-146.

1881. Ueber mehrere neue Conchylien, theils aus Central-Asien theils von S. M. Schiff *Gazelle*. *Sitzb. Ges. Natur. Freunde Berlin*, pp. 63-67.

1902. Neue Arten von Meer-Conchylien aus den Sammlungen der deutschen Tiefsee-Expedition. *Sitzb. Ges. Natur. Freunde Berlin*, pp. 237-244.

1904. Die beschalteten Gastropoden der deutschen Tiefsee-Expedition 1898-1899. Systematisch-geographischer Teil. *Deutsche Tiefsee-Expedition 1898-1899*, vol. 7, pp. 1-146.

MELVILL, J. C.

1885. Description of two new species of shells. *Journ. Conch. (Leeds)*, vol. 4, p. 316.

1888. A survey of the genus *Cypraea* (Linn.), its nomenclature, geographical distribution and distinctive affinities, with descriptions of two new species and several species. *Mem. Proc. Manchester Lit. Philos. Soc.*, ser. 4, vol. 1, pp. 184-235.

1888. Descriptions of fifteen new species of *Mitra*. *Journ. Conch. (Leeds)*, vol. 5, pp. 281-288.

1891. An historical account of the genus *Latirus* (Montfort) and its dependencies, with descriptions of eleven new species, and a catalogue of *Latirus* and *Peristernia*. *Mem. Proc. Manchester Lit. Philos. Soc.*, vol. 41, pp. 365-411.

1895. Descriptions of four new species of *Engina* and a new species of *Defrancia*. *Proc. Malac. Soc. London*, vol. 1, pp. 226-228.

MELVILLE, J. C. and STANDEN ROBERT.

1907. The marine mollusca of the Scottish Antarctic Expedition. Part 8. Voyage of the *Scotia*.

MENKE, C. T.

1845. In Philippi's "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien," p. 13 (or 91).

1848. In Krauss' "Südafrikanischen Mollusken," p. 122.

1848. Ein südafrikanischer *Unio*. *Zeitschr. Malak.*, pp. 28-29.

MÖRCH, O. A. L.

1862. Review of the Vermetidae, pt. 3. *Proc. Zool. Soc., London*, pp. 54-83.

MÜHLFELD, MEGERLE VON.

1845. In Philippi's "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien," Heft 2, pp. 3-4.

NIERSTRASZ, H. F.

1906. Beiträge zur Kenntnis der Fauna von Süd-Afrika. VI. Chitonen aus der Kapkolonie und Natal. *Zool. Jahrb.*, vol. 23, Heft 4, pp. 487-520.

ORBIGNY, ALCIDE D'.

1835-48. *Histoire Naturelle. Cephalopodes*.

PEFFER, GEORG.

1884. Die Cephalopoden des Hamburger Naturhistorischen Museums. Separat-Abdruck *Abh. Naturw. Ver. in Hamburg*, vol. 8, Abth. 1, pp. 1-30.

## PHILIPPI, R. A.

1836. Enumeratio Molluscorum Siciliae, pp. i-xiv, 1-268.  
 1844. Enumeratio Molluscorum Siciliae, pp. i-iv, 1-304.  
 1845. Description of a new species of Trochus, and of eighteen new species of Littorina, in the collection of H. Cuming, Esq. Proc. Zool. Soc., London, pp. 138-143.  
 1848. In Krauss' "Sudafricanischen Mollusken," pp. 14, 104, 119.  
 1851. Centuria quinta Testaceorum novorum. Zeitschr. Malak., pp. 123-126.

## PILSBRY, H. A.

1889. Manual of Conchology, vol. 11, pp. 1-519.  
 1890. Manual of Conchology, vol. 12, pp. 1-323.  
 1891. Manual of Conchology, vol. 13, pp. 1-195.  
 1893. Manual of Conchology, vol. 15, pp. 1-436.  
 1894. Descriptive notices of new Chitons—IV. Nautilus, vol. 8, No. 1, pp. 8-9.  
 1901. New species of mollusks from South Africa and Burma. Proc. Acad. Nat. Sci. Philadelphia, pp. 188-190.

## QUOY, J. R. C. and GAIMARD, PAUL.

1824. Voyage of the *Uranie* and *Physicienne*. Zoology.  
 1832. Zoologie de la Voyage de l'*Astrolabe*. Vol. 2, pp. 1-686.  
 1834. Zoologie de la Voyage de l'*Astrolabe*. Vol. 3, pp. 1-954.

## RANG, S.

1828. Histoire naturelle des Aplysiens, pp. 1-83.  
 1829. Manuel de l'Histoire naturelle des Mollusques et de leurs Coquilles.  
 1837. Des Cephalopodes Cryptodibranches. Magas. Zool., pp. 1-77.  
 1852. In Souleyet's Voyage Autour du Monde sur *La Bonite*, vol. 2 pp. 140-143.

## REDFIELD, J. H.

1870. Catalogue of the known species, recent and fossil, of the family Marginellidae. Amer. Journ. Conch., new ser., vol. 6, pt. 4, pp. 215-269.

## REEVE, L. A.

1843. Descriptions of new species of shells figured in the "Conchologia Iconica." Proc. Zool. Soc., London, pp. 168-197.  
 1843-49. Monograph of the genus Conus. Conchologia Iconica, vol. 1.  
 1844-45. Monograph of the genus Mitra. Conchologia Iconica, vol. 2.  
 1845. Descriptions of 89 new species of Mitra, chiefly from the collection of H. Cuming, Esq. Proc. Zool. Soc., London, pp. 45-61.  
 1845. Descriptions of new species of shells. Proc. Zool. Soc., London, pp. 108-119.  
 1845-49. Monograph of the genus Murex. Conchologia Iconica, vol. 3.  
 1846. On new species of Pleurotoma. Proc. Zool. Soc., London, pp. 3-6.  
 1847. Monograph of the genus Turbinella. Conchologia Iconica, vol. 4.  
 1847-48. Monograph of the genus Chiton. Conchologia Iconica, vol. 4.  
 1849-50. Monograph of the genus Fissurella. Conchologia Iconica, vol. 6.  
 1854-55. Monograph of the genus Lutraria. Conchologia Iconica, vol. 8.  
 1854-55. Monograph of the genus Patella. Conchologia Iconica, vol. 8.  
 1855. Monograph of the genus Natica. Conchologia Iconica, vol. 9.  
 1855-56. Monograph of the genus Neritina. Conchologia Iconica, vol. 9.  
 1858. Monograph of the genus Janthina. Conchologia Iconica, vol. 11.  
 1858-59. Monograph of the genus Columbella. Conchologia Iconica, vol. 11.  
 1861-62. Monograph of the genus Trochus. Conchologia Iconica, vol. 13.  
 1865. Monograph of the genus Marginella. Conchologia Iconica, vol. 15.  
 1874. Monograph of the genus Venerupis. Conchologia Iconica, vol. 19.

## ROCHEBRUNE, A. T. DE.

1881. Diagnoses Specierum novarum familiae Chitonidarum. Journ. Conchyl., vol. 29, pp. 42-46.

ROCHEBRUNE, A. T. DE—Continued.

1882. Diagnoses d'espèces nouvelles de la famille des Chitonidæ. Bull. Soc. Philom. Paris, ser. 7, vol. 6, pp. 190-197.

1883. Diagnoses d'espèces nouvelles de la famille des Chitonidæ. Bull. Soc. Philom. Paris, ser. 7, vol. 8, pp. 32-39.

1883. Etude monographique de la famille des Sepiadæ. Bull. Soc. Philom. Paris, ser. 7, vol. 8, pp. 74-122.

SAUSSAYE, M. PETIT DE LA.

1852. Description de coquilles nouvelles. Journ. Conchyl., vol. 3, pp. 162-165.

SMITH, E. A.

1873. Remarks on a few species belonging to the family Terebridæ, and descriptions of several new forms in the collection of the British Museum. Ann. Mag. Nat. Hist., ser. 4, vol. 11, pp. 262-271.

1876. A list of marine shells, chiefly from the Solomon Islands, with descriptions of several new species. Journ. Linn. Soc., vol. 12, pp. 535-562.

1877. Diagnoses of new species of Pleurotomidæ in the British Museum. Ann. Mag. Nat. Hist., ser. 4, vol. 19, pp. 488-501.

1877. On the shells of Lake Nyassa, and on a few marine species from Mozambique. Proc. Zool. Soc. London, pp. 712-721.

1880. Descriptions of 12 new species of shells. Proc. Zool. Soc., London, pp. 478-485.

1882. Diagnoses of new species of Pleurotomidæ in the British Museum. Ann. Mag. Nat. Hist., ser. 5, vol. 10, pp. 206-218.

1885. Report on the Lamellibranchiata collected by H. M. S. *Challenger* during the years 1873-76. Zool. *Challenger* Exp., pt. 35, pp. 1-341.

1889. Notes on the genus *Melapium*, H. and A. Adams. Ann. Mag. Nat. Hist., pp. 267-269.

1891. Descriptions of new species of shells from the *Challenger* Expedition. Proc. Zool. Soc., London, ser. 6, vol. 3, pp. 436-445.

1899. Descriptions of new species of South African marine shells. Journ. Conch., vol. 9, No. 8, pp. 247-252.

1901. On South African marine shells, with descriptions of new species. Journ. Conch., vol. 10, No. 4, pp. 104-116.

1901. Volutidae from South Africa. Proc. Malac. Soc. London, vol. 4, pt. 6, pp. 231-235.

1902. Descriptions of new species of marine shells from South Africa. Journ. Conch., vol. 10, pp. 248-251.

1903. A list of species of mollusca from South Africa, forming an appendix to G. B. Sowerby's "Marine Shells of South Africa." Proc. Malac. Soc. London, pp. 354-402.

1904. On a collection of marine shells from Port Alfred, Cape Colony. Journ. Malac., vol. 11, pt. 2, pp. 21-43.

1906. On South African Marine Mollusca, with descriptions of new species. Ann. Natal Govern. Mus., vol. 1, pt. 1, pp. 19-71.

1910. On South African Marine Mollusca, with descriptions of new species. Ann. Natal Govern. Mus., vol. 2, pt. 2, pp. 175-220.

1911. On a new species of *Phasianella* from South Africa. Proc. Malac. Soc., vol. 9, pt. 5, pp. 313-314.

1914. Descriptions of some new South African marine shells. Ann. Natal Mus., vol. 3, pt. 1, pp. 1-6, pl.

SOULEYET and EYDOUX, M.

1852. Voyage Autour du Monde exécuté pendant les années 1836 et 1837 sur la corvette *La Bonite*. Zoologie. Vol. 2, pp. 1-664.

SOWERBY, G. B. (Three generations.)

1825. A catalogue of the shells contained in the collection of the late Earl of Tankerville, arranged according to the Lamarckian Conchological System. Pp. i-vii, 1-92, appendix pp. i-xxxiv.
- 1832-40. The Conchological Illustrations. Vols. 1 and 2.
1834. Characters of new genera and species of mollusca and conchifera, collected by Mr. Cuming. Proc. Zool. Soc., London, pp. 17-19.
1834. Characters of new genera and species of mollusca and conchifera, collected by Mr. Cuming. Proc. Zool. Soc., London, pp. 123-128.
1835. Characters of new genera and species of mollusca and conchifera, collected by Mr. Cuming. Proc. Zool. Soc., London, pp. 84-85.
1840. Descriptions of some new species of Murex, principally from the collection of H. Cuming, Esq. Proc. Zool. Soc., London, pp. 137-147.
1840. Descriptions of some new Chitons. Charlesworth's Mag. Nat. Hist., vol. 4, new ser., pp. 287-294.
1847. Monograph of the genus Columbella. Thesaurus Conchyliorum, pp. 109-146.
1847. Monograph of the genus Marginella. Thesaurus Conchyliorum, pp. 373-406.
1848. Descriptions of some new species of Cancellaria in the collection of Mr. H. Cuming. Proc. Zool. Soc., London, pp. 136-138.
1851. Monograph of the genus Cytheraea. Thesaurus Conchyliorum, pp. 611-648.
- 1857-58. Monograph of the genus Conus. Thesaurus Conchyliorum, pp. 1-56.
1862. Monograph of the family Fissurellidae. Thesaurus Conchyliorum, pp. 183-226.
1870. Descriptions of forty-eight new species of shells. Proc. Zool. Soc., London, pp. 249-259.
1871. Monograph of the genus Oliva, from a diagnosis by F. P. Marrat. Thesaurus Conchyliorum, pt. 30, pp. 1-46.
1871. Monograph of the genus Ostrea. Reeve's "Conchologia Iconica," vol. 18.
1873. Descriptions of five new Cones. Proc. Zool. Soc., London, pp. 145-146.
1873. Descriptions of twelve new species of shells. Proc. Zool. Soc., London, pp. 718-722.
1875. Descriptions of ten new species of shells. Proc. Zool. Soc., London, pp. 125-129.
1880. Monograph of the genus Fusus. Thesaurus Conchyliorum, pp. 69-97.
1883. Monograph of the family Calyptraeidae. Thesaurus Conchyliorum, pp. 55-71.
1886. Marine shells of South Africa, collected at Port Elizabeth, with descriptions of some new species. Journ. Conchol. (Leeds), vol. 5, pp. 2-13.
1888. Descriptions of sixteen new species of shells. Proc. Zool. Soc., London, pp. 207-213.
1889. Some further notes on marine shells collected at Port Elizabeth, South Africa, with descriptions of some new species. Journ. of Conchol. (Leeds), vol. 6, pp. 6-15.
1889. Further notes on marine shells of South Africa, with descriptions of new species. Journ. Conchol. (Leeds), vol. 6, pp. 147-159.
1892. Marine shells of South Africa. pp. 1-89.
1894. Marine shells of South Africa. Journ. Conch. (Leeds), vol. 7, pp. 368-378.
1897. Appendix to "Marine shells of South Africa." pp. 1-42.
1898. Marine Investigations in South Africa, No. 5. Description of a new South African marine gasteropod. pp. 5-7.
1900. Marine shells from Pondoland and the Kowie. Proc. Malac. Soc. London, vol. 4, pt. 1, pp. 1-7.

## SOWERBY, G. B.—Continued.

1901. On seven new species of marine mollusca collected by Dr. H. Becker at The Kowie, South Africa. *Proc. Malac. Soc. London*, vol. 4, pt. 5, pp. 213-215.
1902. Marine Investigations in South Africa. (Mollusca) pp. 93-100.
1903. Marine Investigations in South Africa. (Mollusca) vol. 2, pp. 213-232.
1904. Marine Investigations in South Africa. (Mollusca-Pelecypoda) vol. 4, pp. 1-19.
1906. New species of South African shells. *Proc. Malac. Soc. London*, vol. 7, pt. 1, pp. 37-39.

## SOWERBY, JAMES.

- 1821-25. The genera of recent and fossil shells, I-XXXI.

## SPENGLER.

- 1792-1802. *Skrivter af Naturhistorie-Selskabet*. (I have not had the privilege of seeing this publication.)

## STIMPSON, WILLIAM.

1855. Descriptions of some new marine invertebrata. *Proc. Acad. Nat. Sci. Philadelphia*, ser. 1, vol. 7, No. X, pp. 385-395.
1865. On certain genera and families of zoophagous gasteropods. *Amer. Journ. Conch.*, vol. 1, pp. 55-64.

## STREBEL, H.

1911. Zur Gattung *Fasciolaria* Lam. *Jahrb. Hamburg. Wiss. Anst.*, vol. 28, Beiheft 2, pp. 1-58.

## SWAINSON, WILLIAM.

1829. Zoological Illustrations, vol. 1, ser. 2. *Journ. Sci. Lit. Arts*, vol. 18, p. 282.

## SYKES, E. R.

1899. On *Dinoplax fossus*, n. sp., and *Chiton crawfordi*, n. sp., from South Africa. *Proc. Malac. Soc. London*, vol. 3, pt. 5, pp. 277-279.
1901. Description of *Onithochiton* (?) *isipingoensis*, n. sp., from South Africa. *Proc. Malac. Soc. London*, vol. 4, p. 259.
1902. Description of *Chaetopleura destituta*, n. sp., from South Africa. *Proc. Malac. Soc. London*, vol. 5, p. 195.

## VANATTA, E. G.

1901. New marine mollusks. *Proc. Acad. Nat. Sci. Philadelphia*, pp. 182-187.

## VAYSSIÈRE, A.

1900. Description de deux nouvelles especes de Pleurobranchides. *Journ. Conchy.*, vol. 48, pp. 8-11.

## WATSON, R. B.

1883. Mollusca of H. M. S. *Challenger* Expedition. Pt. 12, *Journ. Linn. Soc. London*, vol. 16, pp. 324-343.
1883. Mollusca of H. M. S. *Challenger* Expedition. Pt. 14, *Journ. Linn. Soc. London*, vol. 16, pp. 372-392.

## WEINKAUFF, H. C.

1873. Monograph on *Conus* in Martini-Chemnitz' "Conchylien-Cabinet," vol. 4, pp. 1, 2.
1879. Die Gattungen *Marginella* und *Erato*. Martini-Chemnitz' "Conchylien-Cabinet," vol. 5, pt. 4, pp. 1-166.

## WOODWARD, S. P.

1855. On *Panopaea aldrovandi* Lamarck. *Proc. Zool. Soc. London*, vol. 23, pp. 218-221.





LIST OF SPECIES COLLECTED BY LIEUT. COL. TURTON AT PORT  
ALFRED, SOUTH AFRICA.

- |                                                  |                                                 |
|--------------------------------------------------|-------------------------------------------------|
| 1. <i>Argonauta argo</i> Linnaeus.               | 45. <i>Conus caffer</i> Krauss.                 |
| 2. <i>Spirula peronii</i> Lamarck.               | 46. <i>Conus guttatus</i> Kiener.               |
| 3. <i>Cavolina longirostris</i> Lesueur.         | 47. <i>Conus pictus</i> Reeve.                  |
| 4. <i>Cavolina globulosa</i> Rang.               | 48. <i>Conus infrenatus</i> Reeve.              |
| 5. <i>Styliola africana</i> Bartsch.             | 49. <i>Conus bairstowi</i> Sowerby.             |
| 6. <i>Actaeon albus</i> Sowerby.                 | 50. <i>Conus</i> , species?                     |
| 7. <i>Bullina scabra</i> Gmelin.                 | 51. <i>Clionella kraussi</i> Smith.             |
| 8. <i>Acteocina smithi</i> Bartsch.              | 52. <i>Clionella bipartita</i> Smith.           |
| 9. <i>Acteocina</i> , species?                   | 53. <i>Clionella subventricosa</i> Smith.       |
| 10. <i>Retusa truncatula</i> Bruguiere.          | 54. <i>Clionella confusa</i> Smith.             |
| 11. <i>Volvula</i> , species?                    | 55. <i>Clionella rosaria</i> Reeve.             |
| 12. <i>Cylichna africana</i> Bartsch.            | 56. <i>Clionella sybaritica</i> Bartsch.        |
| 13. <i>Cylichna tubulosa</i> Gould.              | 57. <i>Clionella nereia</i> Bartsch.            |
| 14. <i>Bullaria ampulla</i> Linnaeus.            | 58. <i>Clionella turtoni</i> Bartsch.           |
| 15. <i>Bullaria</i> , species?                   | 59. <i>Clionella</i> , species?                 |
| 16. <i>Haminea alfredensis</i> Bartsch           | 60. <i>Clionella bornii</i> Smith.              |
| 17. <i>Ringicula turtoni</i> Bartsch.            | 61. <i>Clionella?</i> <i>platystoma</i> Smith.  |
| 18. <i>Ringicula africana</i> Bartsch.           | 62. <i>Clionella</i> , species?                 |
| 19. <i>Hydatina physis</i> Linnaeus.             | 63. <i>Turris fultoni</i> Sowerby.              |
| 20. <i>Cylindrobulla turtoni</i> Bartsch.        | 64. <i>Clavatula taxus</i> Kiener.              |
| 21. <i>Volvatella laguncula</i> Sowerby.         | 65. <i>Clavatula haliplex</i> Bartsch.          |
| 22. <i>Tethys maculata</i> Rang.                 | 66. <i>Clavatula halistrepta</i> Bartsch.       |
| 23. <i>Tethys concava</i> Sowerby.               | 67. <i>Clavatula helenae</i> Bartsch.           |
| 24. <i>Tethys</i> , species?                     | 68. <i>Clavatula</i> , species?                 |
| 25. <i>Philine capensis</i> Bergh.               | 69. <i>Drillia rousi</i> Sowerby.               |
| 26. <i>Oxynoë natalensis</i> Smith.              | 70. <i>Drillia caffra</i> Smith.                |
| 27. <i>Melampus acinoides</i> Morelet.           | 71. <i>Drillia signa</i> Bartsch.               |
| 28. <i>Melampus</i> , species?                   | 72. <i>Drillia layardi</i> Sowerby.             |
| 29. <i>Microtralia</i> , species?                | 73. <i>Drillia diversa</i> Smith.               |
| 30. <i>Siphonaria concinna</i> Sowerby.          | 74. <i>Drillia bairstowi</i> Sowerby.           |
| 31. <i>Siphonaria capensis</i> Quoy and Gaimard. | 75. <i>Drillia hottentota</i> Smith.            |
| 32. <i>Siphonaria capensis lineolata</i> Krauss. | 76. <i>Drillia albonodulosa</i> Smith.          |
| 33. <i>Siphonaria aspera</i> Krauss.             | 77. <i>Drillia thetis</i> Smith.                |
| 34. <i>Gadinia costata</i> Krauss.               | 78. <i>Drillia nivosa</i> Smith.                |
| 35. <i>Ampullarina africana</i> Smith.           | 79. <i>Drillia subcontracta</i> Smith.          |
| 36. <i>Terebra capensis</i> Smith.               | 80. <i>Drillia praetermissa</i> Smith.          |
| 37. <i>Terebra suspensa</i> Smith.               | 81. <i>Drillia lara</i> Bartsch.                |
| 38. <i>Terebra apicistincta</i> Sowerby.         | 82. <i>Mangilia capensis</i> Smith.             |
| 39. <i>Terebra</i> , species?                    | 83. <i>Mangilia dina</i> Bartsch.               |
| 40. <i>Conus</i> , species?                      | 84. <i>Mangilia verrucosa</i> Sowerby.          |
| 41. <i>Conus rosaceus</i> Chemnitz.              | 85. <i>Mangilia gisna</i> Bartsch.              |
| 42. <i>Conus aurora</i> Sowerby.                 | 86. <i>Mangilia consanguinea</i> Sowerby.       |
| 43. <i>Conus lavendulus</i> Bartsch.             | 87. <i>Mangilia nisga</i> Bartsch.              |
| 44. <i>Conus alfredensis</i> Bartsch.            | 88. <i>Mangilia helga</i> Bartsch.              |
|                                                  | 89. <i>Mangilia?</i> <i>crassilirata</i> Smith. |

90. *Mangilia eucosmia* Bartsch.
91. *Mangilia herilda* Bartsch.
92. *Mangilia*, species?
93. *Mangilia grayi* Reeve.
94. *Mangilia nympha* Bartsch.
95. *Mangilia*, species?
96. *Mangilia amplexa* Gould.
97. *Mangilia humerosa* Bartsch.
98. *Mangilia ponsonbyi* Sowerby.
99. *Mangilia*, species?
100. *Mangilia siren* Smith.
101. *Cythara alfredensis* Smith.
102. *Cythara ima* Bartsch.
103. *Daphnella?* *sulcata* Sowerby.
104. *Daphnella alfredensis* Bartsch.
105. *Cancellaria foveolata* Sowerby.
106. *Cancellaria semidisjuncta* Sowerby.
107. *Eburna papillaris* Sowerby.
108. *Ancilla obtusa* Swainson.
109. *Ancilla reevei* Smith.
110. *Ancilla albozonata* Smith.
111. *Ancilla obesa* Sowerby.
112. *Ancilla fasciata* Reeve.
113. *Ancilla marmorata* Reeve.
114. *Ancilla pura* Sowerby.
115. *Ancilla bulloides* Reeve.
116. *Ancilla osculata* Sowerby.
117. *Ancilla*, species?
118. *Sylvanochlea ancilla* Sowerby.
119. *Sylvanochlea*, species?
120. *Marginella pyrum* Gronovius.
121. *Marginella rosea* Lamarck.
122. *Marginella mosaica* Sowerby.
123. *Marginella ornata* Redfield.
124. *Marginella*, species?
125. *Marginella lineolata* Sowerby.
126. *Marginella piperita* Hinds.
127. *Marginella albocincta* Sowerby.
128. *Marginella bairstowi* Sowerby.
129. *Marginella punctilineata* Smith.
130. *Marginella keenii* Marrat.
131. *Marginella eucosmia* Bartsch.
132. *Marginella*, species?
133. *Marginella cosmia* Bartsch.
134. *Marginella*, species?
135. *Marginella munda* Smith.
136. *Marginella zonata* Kiener.
137. *Marginella bilineata* Krauss.
138. *Marginella neglecta* Sowerby.
139. *Marginella turtoni* Bartsch.
140. *Marginella cleo* Bartsch.
141. *Marginella cylindrica* Sowerby.
142. *Marginella fallax* Smith.
143. *Marginella lepta* Bartsch.
144. *Marginella dulcis* Smith.
145. *Marginella burnupi* Sowerby.
146. *Marginella differens* Smith.
147. *Marginella alfredensis* Bartsch.
148. *Marginella algoensis* Smith.
149. *Marginella almo* Bartsch.
150. *Marginella zeyheri* Krauss.
151. *Marginella*, species?
152. *Voluta africana* Reeve.
153. *Voluta (Callipara) bullata* Swainson.
154. *Xancus truncatus* Sowerby.
155. *Mitra bathyraphe* Sowerby.
156. *Mitra canaliculata* Sowerby.
157. *Mitra capensis* Dunker.
158. *Mitra ima* Bartsch.
159. *Mitra euzonata* Sowerby.
160. *Mitra kowiensis* Sowerby.
161. *Mitra latruncularia* Reeve.
162. *Mitra merula* Sowerby.
163. *Mitra*, species?
164. *Mitra patula* Reeve.
165. *Mitra picta* Reeve.
166. *Mitromorpha volva* Sowerby.
167. *Fasciolaria heyneamanni* Dunker.
168. *Fasciolaria alfredensis* Bartsch.
169. *Fasciolaria*, species?
170. *Latirus rousi* Sowerby.
171. *Latirus bairstowi* Sowerby.
172. *Fusinus ocelliferus* Born.
173. *Fusinus cingulatus* Smith.
174. *Cominella tigrina* Kiener.
175. *Cominella porcata* Gmelin.
176. *Cominella papyracea* Bruguiere.
177. *Cominella lagenaria* Lamarck.
178. *Cominella elongata* Dunker.
179. *Cominella alfredensis* Bartsch.
180. *Cominella unifasciata* Sowerby.
181. *Cominella puncturata* Sowerby.
182. *Cominella angusta* Sowerby.
183. *Cominella*, species?
184. *Tritonidea insculpta* Sowerby.
185. *Euthria ponsonbyi* Sowerby.
186. *Euthria fuscotincta* Sowerby.
187. *Euthria turtoni* Bartsch.
188. *Colubraria alfredensis* Bartsch.
189. *Alectrion capensis* Dunker.
190. *Alectrion crawfordi* Sowerby.
191. *Alectrion kochiana* Dunker.
192. *Alectrion quantula* Gould.
193. *Alectrion cerotina* A. Adams.
194. *Alectrion plicosa* Dunker.
195. *Alectrion pyramidalis* A. Adams.
196. *Alectrion kraussiana* Dunker.
197. *Desmoulea retusa* Lamarck.

198. *Desmoulea abbreviata* Gmelin.
199. *Bullia annulata* Lamarck.
200. *Bullia trifasciata* Smith.
201. *Bullia aepynota* Bartsch.
202. *Bullia lara* Bartsch.
203. *Bullia tenuis* Reeve.
204. *Bullia alfredensis* Bartsch.
205. *Bullia almo* Bartsch.
206. *Bullia callosa* Wood.
207. *Bullia*, species?
208. *Bullia pura* Melvill.
209. *Bullia diluta* Krauss.
210. *Bullia*, species?
211. *Bullia digitalis* Meuschen.
212. *Bullia rhodostoma* Gray.
213. *Bullia*, species?
214. *Bullia laevis* Gmelin.
215. *Columbella* (*Seminella*) *lightfooti* Smith.
216. *Columbella* (*Seminella*) *capensis* Smith.
217. *Columbella* (*Seminella*) *alfredensis* Bartsch.
218. *Columbella* (*Seminella*), species?
219. *Columbella* (*Anachis*) *beckeri* Sowerby.
220. *Columbella* (*Anachis*) *algoensis* Sowerby.
221. *Columbella* (*Anachis*) *kraussi* Sowerby.
222. *Columbella* (*Anachis*) *io* Bartsch.
223. *Columbella* (*Anachis*), species?
224. *Columbella* (*Anachis*), species?
225. *Columbella* (*Alia*) *pyramidalis* Sowerby.
226. *Columbella* (*Alia*) *adjacens* Smith.
227. *Columbella* (*Alia*) *albuginosa* Reeve.
228. *Columbella* (*Alia*) *apicata* Smith.
229. *Columbella* (*Alia*), species?
230. *Columbella* (*Alia*), species?
231. *Alcira elegans* H. Adams.
232. *Alcira*, species?
233. *Alcira*, species?
234. *Murex uncinarius* Lamarck.
235. *Murex alfredensis* Bartsch.
236. *Trophon kowiensis* Sowerby.
237. *Trophon insignis* Sowerby.
238. *Trophon*, species?
239. *Trophon*, species?
240. *Tritonalia craufordii* Sowerby.
241. *Tritonalia kieneri* Reeve.
242. *Tritonalia babingtoni* Sowerby.
243. *Thais capensis* Petit.
244. *Thais texturata* Smith.
245. *Thais castanea* Kuster.
246. *Thais cataracta* Chemnitz.
247. *Thais squamosa* Lamarck.
248. *Latiaxis rosaceus* Smith.
249. *Coralliophila rubrococcinea* Melvill and Standen.
250. *Melapium bulbosum* Wood.
251. *Epitonium africanum* Bartsch.
252. *Epitonium tenebrosum* Sowerby.
253. *Epitonium durbancense* Smith.
254. *Epitonium lactum* Krauss.
255. *Epitonium aglaia* Bartsch.
256. *Epitonium*, species?
257. *Acrilla thalia* Bartsch.
258. *Graphis africana* Bartsch.
259. *Janthina communis* Lamarck.
260. *Janthina globosa* Swainson.
261. *Janthina trochoidea* Reeve.
262. *Janthina exigua* Lamarck.
263. *Janthina fragilis* Lamarck.
264. *Melanella dilecta* Smith.
265. *Melanella algoensis* Smith.
266. *Melanella simplex* Sowerby.
267. *Melanella carifa* Bartsch.
268. *Melanella icafra* Bartsch.
269. *Melanella alfredensis* Bartsch.
270. *Melanella iota* Bartsch.
271. *Melanella distincta* Smith.
272. *Melanella langleyi* Sowerby.
273. *Melanella farica* Bartsch.
274. *Melanella thalia* Bartsch.
275. *Melanella asser* Bartsch.
276. *Melanella*, species?
277. *Melanella acrifra* Bartsch.
278. *Melanella*, species?
279. *Melanella cifara* Bartsch.
280. *Melanella irafca* Bartsch.
281. *Subeulima magnifica* Bartsch.
282. *Niso balteata* Sowerby.
283. *Niso alfredensis* Bartsch.
284. *Pyramidella* (*Orinella*) *africana*, Bartsch.
285. *Pyramidella* (*Orinella*) *alfredensis* Bartsch.
286. *Pyramidella* (*Orinella*) *ima* Bartsch.
287. *Pyramidella* (*Actaeopyramis*) *norna* Bartsch.
288. *Pyramidella* (*Syrnola*) *capensis* Sowerby.
289. *Pyramidella* (*Syrnola*) *pyrrha* Bartsch.
290. *Pyramidella* (*Syrnola*) *aganca* Bartsch.
291. *Pyramidella* (*Syrnola*) *minor* Smith.
292. *Pyramidella* (*Syrnola*), species?
293. *Pyramidella* (*Syrnola*) *tarpeia* Bartsch.
294. *Pyramidella* (*Syrnola*) *hera* Bartsch.

295. *Turbonilla* (*Ptycheulimella*) *erna* Bartsch.  
 296. *Turbonilla* (*Chemnitzia*) *gemmula* Smith.  
 297. *Turbonilla* (*Chemnitzia*) *kraussi* Clessin.  
 298. *Turbonilla* (*Pselliogyra*) *adaba* Bartsch.  
 299. *Turbonilla* (*Strioturbinilla*) *secura* Bartsch.  
 300. *Turbonilla* (*Strioturbonilla*) *laevocostata* Sowerby.  
 301. *Turbonilla* (*Pyrgolampros*) *angea* Bartsch.  
 302. *Turbonilla* (*Pyrgiscus*) *helenae* Bartsch.  
 303. *Turbonilla* (*Pyrgiscus*) *atossa* Bartsch.  
 304. *Turbonilla* (*Pyrgiscus*), species?  
 305. *Turbonilla* (*Pyrgiscus*), species?  
 306. *Turbonilla* (*Pyrgiscus*) *tritonina* Bartsch.  
 307. *Turbonilla* (*Pyrgiscus*) *zenobia* Bartsch.  
 308. *Turbonilla* (*Pyrgiscus*) *tincta* Sowerby.  
 309. *Turbonilla* (*Pyrgiscus*) *maia* Bartsch.  
 310. *Turbonilla* (*Pyrgiscus*) *tefuna* Bartsch.  
 311. *Turbonilla* (*Pyrgiscus*) *apsa* Bartsch.  
 312. *Turbonilla* (*Pyrgiscus*), species?  
 313. *Turbonilla* (*Dunkeria*) *tegulata* Sowerby.  
 314. *Turbonilla* (*Cingulina*) *trachealis* Gould.  
 315. *Turbonilla* (*Cingulina*) *aglaia* Bartsch.  
 316. *Turbonilla* (*Cingulina*) *pellucida* Sowerby.  
 317. *Turbonilla* (*Cingulina*) *callista* Bartsch.  
 318. *Turbonilla* (*Careliopsis*) *carifa* Bartsch.  
 319. *Turbonilla* (*Mormula*) *cifara* Bartsch.  
 320. *Turbonilla* (*Mormula*) *decora* Smith.  
 321. *Turbonilla* (*Peristichia*) *bathyrhapha* Sowerby.  
 322. *Odostomia* (*Odostomella*) *farica* Bartsch.  
 323. *Odostomia* (*Egilina*) *turtoni* Bartsch.  
 324. *Odostomia* (*Pyrgulina*) *arfica* Bartsch.  
 325. *Odostomia* (*Miralda*) *agana* Bartsch.  
 326. *Odostomia* (*Menestho*) *carifa* Bartsch.  
 327. *Odostomia* (*Menestho*) *rifaca* Bartsch.  
 328. *Odostomia* (*Menestho*) *ficara* Bartsch.  
 329. *Odostomia* (*Evalea*) *lucida* Sowerby.  
 330. *Odostomia* (*Evalea*) *lavertinae* Smith.  
 331. *Odostomia* (*Evalea*) *aethra* Bartsch.  
 332. *Odostomia* (*Evalea*) *gea* Bartsch.  
 333. *Odostomia* (*Evalea*) *cifara* Bartsch.  
 334. *Odostomia* (*Evalea*) *acrifra* Bartsch.  
 335. *Odostomia* (*Odostomia*) *irafca* Bartsch.  
 336. *Odostomia* (*Odostomia*) *icafra* Bartsch.  
 337. *Atlanta* *peronii* Lesueur.  
 338. *Bursa* (*Marsupina*), species?  
 339. *Bursa* (*Marsupina*), species?  
 340. *Eugyrina* *gemmaefera* Euthyme.  
 341. *Eugyrina* *gemmaefera* *lepta* Bartsch.  
 342. *Argobuccinum* *argus* Gmelin.  
 343. *Cymatium* *doliarium* Lamarck.  
 344. *Cymatium* *olearium* Linnaeus.  
 345. *Cymatium* *africanum* A. Adams.  
 346. *Cymatium* *klenei* Sowerby.  
 347. *Nyctilochus* *alfredensis* Bartsch.  
 348. *Nyctilochus*, species?  
 349. *Aspelia* *anceps* Lamarck?  
 350. *Cassis* *achatina* Lamarck.  
 351. *Cassis* *zealanica* Lamarck.  
 352. *Dolium* *dunkeri* Hanley.  
 353. *Amphiperas* *beckeri* Smith.  
 354. *Amphiperas* *smithi* Bartsch.  
 355. *Cypraea* *capensis* Lamarck.  
 356. *Cypraea* *similis* Gray.  
 357. *Cypraea* *vitellus* Linnaeus.  
 358. *Cypraea*, species?  
 359. *Cypraea* *edentula* Gray.  
 360. *Cypraea* *citrina* Gray.  
 361. *Cypraea* *algaensis* Gray.  
 362. *Cypraea* *ovula* Lamarck.  
 363. *Cypraea* *fimbriata* Gmelin.  
 364. *Trivia* *oniscus* Lamarck.  
 365. *Trivia* *formosa* Gaskoin.  
 366. *Trivia* *vesicularis* Gaskoin.  
 367. *Trivia* *pellucidula* Gaskoin.  
 368. *Triphoris* *atea* Bartsch.  
 369. *Triphoris* *convexa* Smith.  
 370. *Triphoris*, species?  
 371. *Triphoris* *helenae* Bartsch.  
 372. *Triphoris* *fuscumaculata* Smith.  
 373. *Triphoris* *smithi* Bartsch.  
 374. *Triphoris* *elsa* Bartsch.  
 375. *Triphoris* *shepstonensis* Smith.  
 376. *Triphoris* *milda* Bartsch.  
 377. *Triphoris* *oreada* Bartsch.  
 378. *Triphoris*, species?  
 379. *Triphoris* *africana* Bartsch.  
 380. *Triphoris* *capensis* Bartsch.  
 381. *Triphoris* *madria* Bartsch.  
 382. *Triphoris*, species?



383. *Triphoris sabita* Bartsch.  
 384. *Triphoris*, species?  
 385. *Triphoris fuscescens* Smith.  
 386. *Triphoris cerea* Smith.  
 387. *Triphoris nina* Bartsch.  
 388. *Triphoris ima* Bartsch.  
 389. *Cerithiopsis* (*Cerithiopsis*) *alfredensis* Bartsch.  
 390. *Cerithiopsis* (*Cerithiopsis*) *exquisita* Sowerby.  
 391. *Cerithiopsis erna* Bartsch.  
 392. *Cerithiopsis* (*Cerithiopsis*) *nina* Bartsch.  
 393. *Cerithiopsis* (*Cerithiopsis*) *ntsaba* Bartsch.  
 394. *Cerithiopsis*, species?  
 395. *Cerithiopsis* (*Cerithiopsis*) *saba* Bartsch.  
 396. *Cerithiopsis*, species?  
 397. *Seila alfredensis* Bartsch.  
 398. *Seila africana* Bartsch.  
 399. *Seila smithi* Bartsch.  
 400. *Eumeta bia* Bartsch.  
 401. *Cerithium contractum* Sowerby.  
 402. *Cerithium vulgatum* Linnaeus.  
 403. *Cerithium crassilabrum* Krauss.  
 404. *Caecum glabratum* Montagu.  
 405. *Vermicularia*, species?  
 406. *Vermicularia*, species?  
 407. *Siliquaria* (*Pyxipoma*) *weldi* Tenison-Woods.  
 408. *Siliquaria*, species?  
 409. *Turritella puncticulata* Sowerby.  
 410. *Turritella carinifera* Lamarck.  
 411. *Turritella annulata* Kiener.  
 412. *Turritella kowiensis* Sowerby.  
 413. *Turritella*, species?  
 414. *Turritella*, species?  
 415. *Littorina africana* Philippi.  
 416. *Littorina africana tryphena* Bartsch.  
 417. *Littorina knysnaensis* Krauss.  
 418. *Littorina ahenea* Reeve.  
 419. *Cithna africana* Bartsch.  
 420. *Alaba pinnae* Krauss.  
 421. *Alabina alfredensis* Bartsch.  
 422. *Alabina africana* Bartsch.  
 423. *Diala infrasulcata* Sowerby.  
 424. *Diala africana* Bartsch.  
 425. *Diala dubia* Sowerby.  
 426. *Diala capensis* Bartsch.  
 427. *Diala almo* Bartsch.  
 428. *Heliacus africanus* Bartsch.  
 429. *Heliacus*, species?  
 430. *Nodulus perspectus* Smith.  
 431. *Nodulus africanus* Bartsch.  
 432. *Sabanaea pyrrha* Bartsch.  
 433. *Sabanaea thalia* Bartsch.  
 434. *Amphithalamus turtoni* Bartsch.  
 435. *Amphithalamus africanus* Bartsch.  
 436. *Alvania nemo* Bartsch.  
 437. *Alvania farquhari* Smith.  
 438. *Alvania alfredensis* Bartsch.  
 439. *Alvania almo* Bartsch.  
 440. *Alvania argentea* Sowerby.  
 441. *Alvania fenestrata* Krauss.  
 442. *Alvania ina* Bartsch.  
 443. *Rissoina alfredi* Smith.  
 444. *Rissoina calia* Bartsch.  
 445. *Rissoina*, species?  
 446. *Rissoina eucosmia* Bartsch.  
 447. *Rissoina*, species?  
 448. *Microsetia conspecta* Smith.  
 449. *Microsetia gisna* Bartsch.  
 450. *Microsetia halia* Bartsch.  
 451. *Microsetia helga* Bartsch.  
 452. *Microsetia irma* Bartsch.  
 453. *Barleeia smithi* Bartsch.  
 454. *Fenella almo* Bartsch.  
 455. *Jeffreysia caffra* Sowerby.  
 456. *Jeffreysia capensis* Sowerby.  
 457. *Assiminea ovata* Krauss.  
 458. *Assiminea umlaasiana* Smith.  
 459. *Assiminea capensis* Bartsch.  
 460. *Assiminea fasciata* Krauss.  
 461. *Assiminea*, species?  
 462. *Trochita helicoidea* Sowerby.  
 463. *Trochita sinensis* Linnaeus.  
 464. *Crepidula aculeata* Gmelin.  
 465. *Crepidula hepatica* Deshayes.  
 466. *Crepidula hepatica complanata* Krauss.  
 467. *Crepidula lentiginosa* Sowerby.  
 468. *Lamellaria perspicua*, Linnaeus.  
 469. *Natica imperforata* Gray.  
 470. *Natica alfredensis* Bartsch.  
 471. *Natica forata* Reeve.  
 472. *Natica africana* Bartsch.  
 473. *Natica napus* Smith.  
 474. *Natica decipiens* Smith.  
 475. *Natica*, species?  
 476. *Natica nemo* Bartsch.  
 477. *Natica*, species?  
 478. *Vanikoro africana* Bartsch.  
 479. *Acmaea roseoradiata* Smith.  
 480. *Patella granatina* Linnaeus.  
 481. *Patella longicosta* Lamarck.

482. *Patella oculus* Reeve.
483. *Patella granularis* Linnaeus.
484. *Patella barbara* Linnaeus.
485. *Patella conspicua* Philippi.
486. *Patella argenvillei* Krauss.
487. *Patella variabilis* Krauss.
488. *Patella compressa* Lamarck.
489. *Patella miniata* Born.
490. *Patella cochlear* Born.
491. *Patella capensis* Dunker.
492. *Patella dunkeri* Krauss.
493. *Patella pruinosa* Krauss.
494. *Helcion pectinatus* Linnaeus.
495. *Phasianella kochii* Philippi.
496. *Phasianella elongata* Krauss.
497. *Phasianella africana* Bartsch.
498. *Phasianella bicarinata* Dunker.
499. *Turbo sarmaticus* Linnaeus.
500. *Turbo cidaris* Gmelin.
501. *Turbo natalensis* Krauss.
502. *Astraea tayloriana* Smith.
503. *Leptothyra africana* Bartsch.
504. *Leptothyra quantilla* Gould.
505. *Leptothyra carminea* Bartsch.
506. *Leptothyra alfredensis* Bartsch.
507. *Clanculus miniatus* Anton.
508. *Clanculus alfredensis* Bartsch.
509. *Clanculus waltonae* Sowerby.
510. *Oxystele merula* Lamarck.
511. *Oxystele tigrina* Chemnitz.
512. *Oxystele sagittifera* Lamarck.
513. *Oxystele tabularis* Krauss.
514. *Gibbula articulata* Gould.
515. *Gibbula fucata* Gould.
516. *Gibbula cicer* Menke.
517. *Gibbula gaudiosa* Gould.
518. *Gibbula thalia* Bartsch.
519. *Gibbula multicolor* Krauss.
520. *Gibbula benzi* Krauss.
521. *Gibbula tryoni* Pilsbry.
522. *Gibbula zonata* Wood.
523. *Gibbula rifaca* Bartsch.
524. *Solariella fuscomaculata* Smith.
525. *Solariella*, species?
526. *Calliostoma eucosmia* Bartsch.
527. *Calliostoma africana* Bartsch.
528. *Euchelus natalensis* Smith.
529. *Cynisca forticostata* Smith.
530. *Cynisca gloriosa* Bartsch.
531. *Cynisca alfredensis* Bartsch.
532. *Cynisca africana* Bartsch.
533. *Teinostoma africana* Smith.
534. *Teinostoma alfredensis* Bartsch.
535. *Ilaira fulgens* Gould.
536. *Lippistes grayi* Adams.
537. *Vitrinella rifaca* Bartsch.
538. *Vitrinella cijara* Bartsch.
539. *Vitrinella ficara* Bartsch.
540. *Vitrinella facira* Bartsch.
541. *Vitrinella*(*Docomphala*)*arifca* Bartsch.
542. *Cyclostrema alfredensis* Bartsch.
543. *Cyclostremella farica* Bartsch.
544. *Cyclostremella africana* Bartsch.
545. *Caporbis africana* Bartsch.
546. *Pondorbis alfredensis* Bartsch.
547. *Discopsis planulata* Sowerby.
548. *Discopsis alfredensis* Bartsch.
549. *Discopsis africana* Bartsch.
550. *Discopsis turtoni* Bartsch.
551. *Leptogyra africana* Bartsch.
552. *Nerita albicilla* Linnaeus.
553. *Neritina*, species?
554. *Nepionic* shell.
555. *Haliotis midae* Linnaeus.
556. *Haliotis sanguinea* Hanley.
557. *Haliotis parva* Linnaeus.
558. *Haliotis alfredensis* Bartsch.
559. *Scissurella jucunda* Smith.
560. *Scismope insignis* Smith.
561. *Fissurella natalensis* Krauss.
562. *Fissurella mutabilis* Sowerby.
563. *Pupillaea aperta* Sowerby.
564. *Fissuridea elizabethae* Smith.
565. *Fissuridea spreta* Smith.
566. *Fissuridea elevata* Dunker.
567. *Fissuridea calyculata* Sowerby.
568. *Fissuridea australis* Krauss.
569. *Fissuridea parviforata* Smith.
570. *Puncturella africana* Bartsch.
571. *Callochiton castaneus* Wood.
572. *Ischnochiton crawfordi* Sykes.
573. *Ischnochiton oniscus* Krauss.
574. *Ischnochiton tigrinus* Krauss.
575. *Dinoplax gigas* Gmelin.
576. *Dinoplax gigas alfredensis* Bartsch.
577. *Dinoplax fossus* Sykes.
578. *Acanthochites garnoti* Blainville.
579. *Acanthochites carpenteri* Pilsbry.
580. *Chiton tulipa* Quoy and Gaimard.
581. *Chiton*, species?
582. *Dentalium exasperatum* Sowerby.
583. *Dentalium regulare* Smith.
584. *Dentalium*, species?
585. *Nucula sculpturata* Sowerby.
586. *Nucula nucleus* Linnaeus?
587. *Limopsis pumilis* Smith.
588. *Glycimeris queketti* Sowerby.
589. *Arca acuminata* Krauss.

590. *Fossularca gibba* Krauss.
591. *Fossularca gradata* Broderip and Sowerby.
592. *Barbatia alfredensis* Bartsch.
593. *Barbatia*, species?
594. *Barbatia cafria* Bartsch.
595. *Pinna squamifera* Sowerby.
596. *Atrina alfredensis* Bartsch.
597. *Atrina afra* Sowerby (?).
598. *Hochstetteria limoides* Smith.
599. *Hochstetteria vilaini* Smith.
600. *Hochstetteria alfredensis* Bartsch.
601. *Hochstetteria paramoea* Bartsch.
602. *Philobrya africana* Bartsch.
603. *Margaritiphora capensis* Sowerby.
604. *Ostrea algoensis* Sowerby.
605. *Pecten natalensis* Smith.
606. *Pecten sulcicostatus* Sowerby.
607. *Plicatula squamosissima* Smith.
608. *Lima perfecta* Smith.
609. *Lima rotundata* Sowerby.
610. *Lima africana* Bartsch.
611. *Lima*, species?
612. *Anomia ephippium* Linnaeus.
613. *Anomia patelliformis* Linnaeus.
614. *Mytilus meridionalis* Krauss.
615. *Mytilus perna* Linnaeus.
616. *Mytilus perna trigonia* Krauss.
617. *Mytilus variabilis* Krauss.
618. *Mytilus variabilis striata* Krauss.
619. *Modiola tenerrima* Smith.
620. *Modiola capensis* Krauss.
621. *Modiola auriculata* Krauss.
622. *Modiola lignea* Reeve.
623. *Crenella striatissima* Sowerby
624. *Crenella alfredensis* Bartsch.
625. *Modiolaria cuneata* Gould.
626. *Modiolaria africana* Bartsch.
627. *Modiolaria ima* Bartsch.
628. *Solemya*, species?
629. *Lyonsia*, species?
630. *Thracia*, species?
631. *Clistoconcha insignis* Smith.
632. *Crassatellites acuminata* Sowerby.
633. *Cuma concentrica* Bartsch.
634. *Cardita* (*Carditamera*) *laticostata* Smith.
635. *Venericardia elata* Sowerby.
636. *Venericardia africana* Bartsch.
637. *Thecalia concamerata* Bruguiere.
638. *Miodontiscus minimus* Smith.
639. *Condylocardia io* Bartsch.
640. *Carditella rugosa* Sowerby.
641. *Carditopsis alfredensis* Bartsch.
642. *Digitaria africana* Bartsch.
643. *Chama gryphina* Lamarck (?).
644. *Lucina globosa* Forskal.
645. *Loripes clausus* Philippi.
646. *Phacoides valida* Smith.
647. *Phacoides despecta* Smith.
648. *Diplodonta africana* Bartsch.
649. *Diplodonta almo* Bartsch.
650. *Felaniella alfredensis* Bartsch.
651. *Ungulina alfredensis* Bartsch.
652. *Scintilla turtoni* Bartsch.
653. *Basterotia tricostralis* Sowerby.
654. *Erycina alfredensis* Bartsch.
655. *Erycina ima* Bartsch.
656. *Erycina carifa* Bartsch.
657. *Erycina rifaca* Bartsch.
658. *Erycina*, species?
659. *Erycina*, species?
660. *Bornia fortidentata* Smith.
661. *Bornia farica* Bartsch.
662. *Bornia arfica* Bartsch.
663. *Bornia* (*Pythina*) *rotundata* Deshayes.
664. *Bornia* (*Pythina*) *africana* Bartsch
665. *Rochefortia similis* Smith.
666. *Rochefortia natalensis* Smith.
667. *Rochefortia enora* Bartsch.
668. *Rochefortia elsa* Bartsch.
669. *Rochefortia milda* Bartsch.
670. *Rochefortia helena* Bartsch.
671. *Rochefortia io* Bartsch.
672. *Rochefortia farma* Bartsch.
673. *Lasea turtoni* Bartsch.
674. *Aligena ovalis* Smith.
675. *Cardium turtoni* Sowerby.
676. *Papyridea* (*Fulvia*) *natalensis* Sowerby.
677. *Dosinia hepatica* Lamarck.
678. *Tivela compressa* Sowerby
679. *Sunetta ovalis* Sowerby.
680. *Circe alfredensis* Bartsch
681. *Chione*, species?
682. *Anomalocardia alfredensis* Bartsch.
683. *Antigona verrucosa* Linnaeus.
684. *Antigona* (?), species?
685. *Paphia disrupta* Sowerby.
686. *Venerupis*, species?
687. *Petricola ponsonbyi* Sowerby.
688. *Petricola*, species?
689. *Tellina albinella alfredensis* Bartsch,
690. *Tellina natalensis* Krauss.
691. *Tellina ponsonbyi* Sowerby.
692. *Tellina triangularis* Chemnitz.
693. *Tellina regularis* Smith.

- |                                               |                                             |
|-----------------------------------------------|---------------------------------------------|
| 694. <i>Tellina</i> , species?                | 708. <i>Donax sordidus</i> Hanley.          |
| 695. <i>Tellina</i> , species?                | 709. <i>Donax simplex</i> Sowerby.          |
| 696. <i>Metis orbicularis</i> Sowerby.        | 710. <i>Donax burnupi</i> Sowerby.          |
| 697. <i>Macoma littoralis</i> Krauss.         | 711. <i>Solen alfredensis</i> Bartsch.      |
| 698. <i>Macoma africana</i> Sowerby.          | 712. <i>Solen capensis</i> Fischer.         |
| 699. <i>Semelc capensis</i> Smith.            | 713. <i>Schizodesma spengleri</i> Linnaeus. |
| 700. <i>Abra africana</i> Bartsch.            | 714. <i>Eastonia africana</i> Bartsch.      |
| 701. <i>Theora alfredensis</i> Bartsch.       | 715. <i>Mactra adansoni</i> Philippi.       |
| 702. <i>Gastrana abildgaardiana</i> Spengler. | 716. <i>Mactra alfredensis</i> Bartsch.     |
| 703. <i>Psammobia burnupi</i> Sowerby.        | 717. <i>Lutraria capensis</i> Deshayes.     |
| 704. <i>Psammobia</i> , species?              | 718. <i>Saxicava arenacea</i> Smith.        |
| 705. <i>Psammotellina capensis</i> Sowerby.   | 719. <i>Saxicava lirata</i> Smith.          |
| 706. <i>Donax serra</i> Chemnitz.             | 720. <i>Gastrochaena</i> , species?         |
| 707. <i>Donax bertini</i> Pilsbry.            | 721. <i>Pholas alfredensis</i> Bartsch.     |

MOLLUSKS REPORTED FROM SOUTH AFRICA NOT CONTAINED IN THE  
COLLECTION OF THE UNITED STATES NATIONAL MUSEUM FROM  
THAT AREA.

In the following list have been cited all those species which have been reported from South Africa, which are not in the United States National Museum from that area. I have given the type-locality from which each species was first reported. If no locality follows the name, it signifies that none was given in the original description. Many of the species listed from South Africa belong to entirely different faunal areas, and the authors who reported them should very carefully compare their material with the species from the type-locality. They will probably find, as I have found in many instances, that their shells, while bearing a superficial resemblance to the South African mollusks, are not specifically the same.

*Acanthochites variegatus* Nierstrasz, Natal.

*Acanthopleura afra* Rochebrune, Cape of Good Hope; Madagascar.

*quatrefagesi* Rochebrune, Cape of Good Hope.

*spinigera* Sowerby.

*Aclis tenuistriata* Sowerby, Port Elizabeth.

*Acrilla gracilis* A. Adams, Indo Pacific.

*Actaeon affinis* A. Adams, China Seas; New Ireland; Borneo; Philippine Islands.

*Agulhasia davidsoni* King, Agulhas Bank.

*Alvania pura* Gould, Simoda.

*Anatina villosiuscula* Macquart, Island of Harris.

*Ancilla angustata* Sowerby, China Seas.

*australis* Sowerby, New Zealand.

*cinnamomea* Lamarck.

*dimidiata* Sowerby, Red Sea.

*hasta* Martens, Agulhas Bank.

*lineolata* A. Adams.

*montrouzieri* Sowerby, Lifu.

*optima* Sowerby, Durban.

*ordinaria* Smith, Port Shepstone.

*Ancillaria contusa* Reeve.

*Anomia tridentata* Forskal.

*Apelodoris ? brunnea* Bergh, Kalk Bay.

*Apicalia biformis* Sowerby, Durban.

*Aplustrum amplustre* Linnaeus, Asia.

*Aplysia allochroa* Bergh, Knysna.

*cirrhifera* Quoy and Gaimard, Isle of France.

*depilans* Linnaeus, Mediterranean Sea.

*eusiphonata* Bergh, East London.

*gargantua* Bergh, Simons Town.



*Aplysia gilchristi* Bergh, False Bay.*lobata* Bergh, Woodstock Beach (Table Bay).*marmorata* Blainville, La Rochelle.*monochroa* Bergh, Hermanus Islands.*poikilia* Bergh, Kalk Bay.*savignana* Ferussac, Red Sea.*woodii* Bergh, East London.*Arca africana* Sowerby, Tugela River mouth.*coelata* Reeve.*divaricata* Reeve, Annaan Island, Pacific Ocean.*domingensis* Lamarck, Santo Domingo, West Indies.*erythraeensis* Jonas, Red Sea.*imbricata* Bruguiere, Senegal; Malacca.*inaequivalvis* Bruguiere, East Indies.*inflata* Krauss, Natal.*kraussii* Philippi, Natal.*lactea* Linnaeus, Mediterranean Sea.*modiolus* Poli, Sicily.*natalensis* Krauss, Natal Point.*navicularis* Bruguiere, Santo Domingo.*nivea* Chemnitz, Red Sea.*nucleus* Linnaeus, Europe.*obliquata* Gray.*ovata* Gmelin, Red Sea.*quoyi* Payer, Valinco, France.*scabra* Poli, Sicily.*scapha* Chemnitz, Red Sea.*squamosa* Lamarck, Seas of New Holland.*Archidoris capensis* Bergh, Cape Point.*granosa* Bergh, Tongaati River and Woodstock Beach (Table Bay).*Archidoris* (?) *scripta* Bergh, off the Hongazi River.*Argonauta böttgeri* Maltzan.*kochiana* Dunker.*tuberculata* Shaw.*Astraliu andersoni* Smith, Durban.*gilchristi* Sowerby, Natal.*Atys cylindrica* Helbling, East Indies.*Auricula caffra* Kuster, Natal Coast.*kraussii* Kuster, Natal Coast.*kusteri* Krauss, Natal Coast.*livida* Deshayes.*pellucens* Menke, Demerara.*umlassiana* Krauss, Natal Coast.*Auriculina lucida* Sowerby, Port Elizabeth.*Avicula flabellum* Reeve, Venezuela.*zebra* Reeve, Moreton Bay.*Axinaea arabica* H. Adams.*Bankivia varians* Becquard, Australia.*Basterotia obtusa* Sowerby, Durban.*Bittium quadricinctum* Smith, Durban.*Bornia seminulum* Philippi, Sicily.*Buccinum arcularia* Linnaeus.*cariniferum* Kuster, Natal Coast.

- Buccinum cerealis* Menke, Cape of Good Hope.  
*clathratum* Adams and Reeve, Cape of Good Hope.  
*coccinella* Lamarck, Coasts of Brittany, France.  
*coronatum* Bruguiere, Madagascar.  
*dunkeri* Kuster, Cape of Good Hope.  
*flavum* Bruguiere.  
*glaucum* Gmelin, Indian Ocean.  
*horridum* Dunker.  
*laevigatum* Martini, East Indies.  
*lineatus* DaCosta, Cornwall, England; West Indies.  
*marginulatum* Lamarck, Mediterranean Sea.  
*marmoratum* Reeve, Capul, Philippine Islands.  
*perdix* Linnaeus, America.  
*perlatum* Kuster, Natal Coast.  
*pictum* Dunker, East Indies.  
*pyramidalis* Gmelin, Tranquebar.  
*rubiginosum* Reeve, Red Sea.  
*rufulum* Kiener, Mediterranean Sea?  
*signata* Dunker, East Indies.  
*situla* Reeve, Annaan Island, Pacific Ocean.  
*testiculus* Linnaeus, Jamaica.  
*violaceum* Quoy and Gaimard, Table Bay.
- Bulla aperta* Linnaeus, Cape of Good Hope.  
*cylindracea* Pennant, British Isles.  
*elongata* A. Adams, Ceylon; Cebu.  
*ficus* Linnaeus, Indian Ocean; Amboyna.  
*natalensis* Krauss, Natal.  
*puncto-striata* Mighels, Casco Bay, Maine.  
*rostrata* A. Adams, Port Lincoln, Australia.  
*solidula* Linnaeus.  
*soluta* Gmelin, Ceylon.  
*spelta* Linnaeus, Mediterranean Sea.  
*umbilicata* Montagu, England.  
*voluta* Quoy and Gaimard, Guam.
- Bullia achatina* Lamarck, South Africa.  
*ancillaeformis* Smith, Port Shepstone.  
*capensis* Euthyme, Cape of Good Hope.  
*mauritiana* Gray, Madagascar.  
*mediolaëvis* Martens, False Bay.  
*pustulosa* Sowerby, Natal.  
*similis* Sowerby, Natal.
- Bullina oblonga* Sowerby, Pondoland.
- Calliostoma bisculptum* Smith, Durban.  
*burnupi* Smith, Durban.  
*crossleyae* Smith, Isezela, Natal; Port Shepstone.  
*farquhari* Sowerby, Port Elizabeth.  
*granoliratum* Sowerby, Cape Point, False Bay.  
*iridescens* Sowerby, Cape Natal.  
*layardi* Sowerby, Pondoland.  
*perfragile* Sowerby, Vasco da Gama Peak; Lion's Head.
- Callochiton dentatus* Spengler, Cape of Good Hope.
- Calyptraea cicatricosa* Reeve, Luzon, Philippine Islands.  
*vorosa* Reeve, Australia.

- Cancellaria imbricata* Watson, Cape of Good Hope.  
*lamellosa* Hinds, Indian Archipelago; Cape of Good Hope; Ceylon; Strait of Macassar; Philippine Islands.  
*producta* Sowerby, off Umhloti River mouth (Natal).
- Cardita calyculata* Lamarck, Atlantic Ocean.  
*concamerata* Bruguiere, America.  
*elata* Sowerby, Port Elizabeth.  
*pulcherrima* Sowerby, Cape Natal.  
*variegata* Bruguiere, East Indies and Africa.
- Carditella capensis* Smith, Simons Bay.
- Cardium adamsii* Reeve, Borneo.  
*asiaticum* Bruguiere, East Indies.  
*burnupi* Sowerby, Durban.  
*fasciatum* Montagu, England.  
*gilchristi* Sowerby, Algoa Bay.  
*lima* Gmelin, Nicobara.  
*natalense* Krauss, Natal.  
*papyraceum* Chemnitz, East Indies.  
*rubicundum* Reeve, Zanzibar.  
*rubrum* Montagu, England.  
*rugosum* Lamarck, Indian Ocean.  
*semisulcatum* Gray, West Indies.  
*tenuicostatum* Lamarck, Timor; New Holland.
- Cassis areola* Lamarck, seas of India; Moluccas.  
*bisulcata* Schubert and Wagner, Manila.  
*craticulatus* Euthyme.  
*pila* Reeve, China.  
*torquata* Reeve, New Holland.
- Cavolina quadridentata* Lesueur, Barbados.  
*trispinosa* Lesueur, Antilles and Indian Ocean.
- Cerithiopsis chapmaniana* Smith, Isezela.  
*insignis* Smith, Port Shepstone.  
*lirata* Sowerby, Port Elizabeth.  
*natalensis* Smith, Tongaat, Natal.  
*neglecta* C. B. Adams, Panama.  
*? peilei* Smith, Port Elizabeth.  
*purpurea* Angas, New South Wales.
- Cerithium alboraricosum* Smith, Providence Reef; Mascarenes; Hawaiian Islands.  
*caeruleum* Sowerby, Red Sea.  
*citrinum* Sowerby, Masbate, Philippine Islands.  
*columna* Sowerby, Philippine Islands.  
*dialeucum* Philippi.  
*echinatum* Lamarck.  
*egenum* Gould, Wilson Island.  
*foveolatum* Sowerby, Port Elizabeth.  
*inaequisculpta* Kobelt, Durban.  
*kochii* Philippi, East Africa.  
*lacteum* Kiener.  
*mediterraneum* Deshayes, Mediterranean.  
*moniliferum* Dufresne, Indian Ocean.  
*natalensis* Kobelt, Natal Coast.  
*obeliscum* Bruguiere, East Indies; Polynesia; Mauritius.  
*pingue* A. Adams, Philippine Islands.

- Cerithium rissoidea* Sowerby.  
     *rufonodulosum* Smith, Algoa Bay.  
     *rugosum* Wood.  
     *taeniatum* Sowerby, New Guinea.  
     *trilineatum* Philippi, Pantellaria Island.  
     *zebrum* Kiener, Indian Ocean; Isle of France.
- ?*Chaetopleura apiculata* Say, East Coast North America.  
     *destituta* Sykes, Durban.  
     *papilio* Spengler, Table Bay.
- Chama gryphoides* Linnaeus, Mediterranean Sea.  
     *iostoma* Conrad, Hawaiian Islands.
- Chemnitzia lactea* Krauss, Natal.  
     *trachealis* Gould, Simons Bay.
- Chione ambigua* Deshayes, Mozambique.
- Chiton africana* Rochebrune, Dakar; Cape Verde; Table Bay; Cape of Good Hope.  
     *brevispinosus* Sowerby, Johanna Island, East Africa.  
     *capensis* Gray, Cape of Good Hope.  
     *carmichaelis* Gray, Cape of Good Hope.  
     *granulatus* Gmelin, American Oceans.  
     *indicus* Sowerby, Cape of Good Hope.  
     *labeculatus* Reeve.  
     *literatus* Krauss, Natal.  
     *lyratus* Sowerby.  
     *macgillivrayi* Carpenter, Tristan d'Acunha.  
     *marginatus* Pennant, Scarborough.  
     *nigrovirescens* Blainville, Cape of Good Hope.  
     *pertusus* Reeve, Simons Bay.  
     *pruinosis* Gould, Off Fort Santa Cruz, Rio Janeiro.  
     *punctulata* Krauss, South Africa.  
     *pustulatus* Krauss, Natal.  
     *solea* Sowerby, Cape of Good Hope.  
     *spiculosus* Reeve, West Indies.  
     *subgigas* Blainville.  
     *sykesi* Sowerby, Cape Point Lighthouse; Vasco da Gama Peak.  
     *textilis* Gray, Cape of Good Hope.  
     *wahlbergi* Krauss, Table Bay.  
     *watsoni* Sowerby, Cape of Good Hope.
- Chitonellus striatus* Lamarck (?), New Holland.
- Chlamys fultoni* Sowerby, Amatikulu, Conical Hill.  
     *gilchristi* Sowerby, Vasco da Gama.  
     *humilis* Sowerby, Great Fish Point; Cape St. Blaize.  
     *natalensis* Smith, Durban.
- Chromodoridella mirabilis* Eliot, Natal.
- Chromodoris albolimbata* Bergh, Off Sebastian Bluff.  
     *annulata* Eliot, Zanzibar.  
     *euelpis* Bergh, Off Umhloti River, mouth.
- Chromodoris* (?) *lineata* Souleyet, East Africa.  
     *runcinata* Bergh, Philippine Islands.
- Cingulina acutilirata* Sowerby, Port Elizabeth.  
     *circinata* A. Adams, Japan.
- Cioniscus unilineatus* Sowerby, Port Elizabeth.
- Circe divaricata* Chemnitz, Ceylon.

- Clanculus carinatus* A. Adams.  
     *laceyi* Sowerby, South Africa.  
     *mixtus* Smith, Port Elizabeth.  
     *waltonae* Sowerby, Port Elizabeth.
- Clathurella commoda* Smith, California.  
     *westcotti* Smith, Durban.
- Clavatula impages* Adams and Reeve, China Sea.  
     *parilis* Smith, Durban.
- Collonia bicarinata* Martens, Agulhas Bank.
- Columbella atrata* Gould, Hong Kong.  
     *avena* Reeve, Cape Colony.  
     *bisflammata* Reeve.  
     *burnupi* Smith, Natal.  
     *consanguinea* Sowerby, Port Elizabeth.  
     *filmerae* Sowerby, Pondoland.  
     *floccata* Reeve, Cape Colony.  
     *kitchingi* Sowerby, Cape of Good Hope.  
     *lactea* Duclos, Indian Ocean and coast of Seychelles.  
     *langleyi* Sowerby, Port Elizabeth.  
     *leptalea* Smith, Unkomaas, Natal.  
     *ligula* Duclos.  
     *mendicaria* (var.) Lamarck, Indian Seas.  
     *mercatoria* Lamarck, Atlantic Ocean; coasts of Island of Goree; Antilles.  
     *obtusa* Sowerby, Society Islands.  
     *pulchella* Sowerby.  
     *pumila* Sowerby, Baie Boise (sud de la Nouvelle Caledonie).  
     *sagena* Reeve, Japan.  
     *shepstonensis* Smith, Port Shepstone; Zanzibar.  
     *turturina* Lamarck.  
     *undata* Duclos.  
     *varians* Sowerby, Galapagos Islands.  
     *versicolor* Sowerby, Annoa or Chain Island.
- Cominella glandiformis* Reeve.  
     *intinctum* Reeve.  
     *prolongata* Smith, Cape Colony.  
     *semisulcata* Sowerby, Port Elizabeth.
- Cominella? sulcata* Sowerby, Port Elizabeth.
- Conus altispiratus* Sowerby, Agulhas Bank; South Africa.  
     *anceps* Sowerby, Philippine Islands.  
     *aplustre* Reeve.  
     *arachnoideus* Gmelin.  
     *arenatus* Hwass, Asia; Amboyna; Cape of Good Hope.  
     *bandanus* Hwass, Moluccas.  
     *betulinus* Linnaeus.  
     *capitaneus* Linnaeus, (?), Asia.  
     *ceylanensis* Hwass, Ceylon.  
     *ceylonicus* Chemnitz, Ceylon.  
     *consors* Sowerby, Philippine Islands.  
     *conspersus* Reeve.  
     *daullei* var. Cross.  
     *dupontii* Kiener.  
     *elongatus* Chemnitz, New Guinea.  
     *eucoronatus* Sowerby, Cape St. Blaize.  
     *flavidus* Lamarck.



*Conus fulvus* Sowerby, South Africa.

*geographus* Linnaeus, India.

*gilchristi* Sowerby, Umhlangakulu River, mouth, Natal.

*gilvus* Reeve, Saldanha Bay, South Africa.

*glans* Bruguiere, St. Bernard, coast of Africa; Madagascar; Isle of France, Moluccas.

*gradatulus* Weinkauff, Agulhas Bank, South Africa.

*hebraeus* Linnaeus, India.

*innexus* A. Adams, Natal

*jaspideus* Kiener, Algoa Bay, South Africa.

*lamarcki* Kiener.

*lautus* Reeve.

*legatus* Lamarck, Indian Ocean.

*lineatus* Chemnitz, East Indies.

*lividus* Lamarck, Indian Ocean.

*loveni* Krauss, Cape of Good Hope; Natal.

*miles* Linnaeus, India.

*miliaris* Hwass.

*minimus* Linnaeus.

*mozambicus* Hwass, Mozambique.

*natalensis* Sowerby, Cape Natal.

*nemocanus* Hwass, Namoca Island.

*nimbosus* Hwass, East Indies.

*obscurus* Humphreys, Masbate, Philippine Islands.

*patens* Sowerby, Vasco da Gama Peak, Cape of Good Hope.

*pauperculus* Sowerby, Cape of Good Hope.

*piperatus* Dillwyn, Indian Ocean.

*plumbeus* Reeve.

*primula* Reeve.

*punctatus* Gmelin.

*queketti* Smith, Natal.

*quercinus* Bruguiere, Isle of France; Madagascar; Cape of Good Hope.

*rattus* Lamarck, America.

*scitulus* Reeve.

*simplex* Sowerby, East Indies.

*tessellatus* Born, African Ocean.

*textile* Linnaeus, Bandam.

*tinianus* Hwass, Tinian Island.

*turritus* Sowerby, Agulhas Bank, South Africa.

*vermiculatus* Lamarck, Asia; Africa; America.

*verreauxii* Kiener, Cape of Good Hope.

*vevillum* Gmelin.

*Coralliophila fragosa* Smith, Scottburgh, Natal.

*fritschi* Martens, False Bay, Cape of Good Hope.

*Corbula cuneata* Hinds, Catbalogan, Philippine Islands; Agulhas Bank; Cape of Good Hope.

*rugifera* Smith, Umkomaas, Natal.

*tunicata* Hinds, Island of Corregidor, Bay of Manila; Straits of Macassar; Cape of Good Hope.

*Crassatella abrupta* Sowerby, Umhloti River, mouth.

*africana* Sowerby, Cape Infanta.

*angulata* Sowerby, Umhlangakulu River, mouth.

*crebrilirata* Sowerby, Agulhas Bank, South Africa.

*gilchristi* Sowerby, Martha Point (South Coast).

- Crassatella glabrata* Lamarck, Ocean d'Afrique ? de l'Inde ?  
*subquadrata* Sowerby, Agulhas Bank, South Africa.  
*tenuis* Sowerby, Cape St. Blaize.
- Crepidula adpersa* Dunker, Guinea.  
*capensis* Quoy, Table Bay; Cape of Good Hope.  
*rugulosa* Dunker, Cape of Good Hope.
- Cryptodon investigatoris* Smith, Ceylon, off Colombo.  
*polygonius* Gould, Simons Bay.  
*subradiatus* Gould, Simons Bay.
- Cryptogramma arakauensis* Nevill, Arakon.
- Cultellus decipiens* Smith, Port Alfred.  
*pellucidus* Pennant, British.
- Cuspidaria forticostata* Sowerby, Cape Natal.  
*gilchristi* Sowerby, Cape Natal.  
*nasuta* Sowerby, Cape Point Lighthouse.  
*optima* Sowerby, Umtralumi River, mouth.
- Cyclas capensis* Krauss, Knysna River.  
*ferruginea* Krauss, Knysna River.
- Cyclostoma ligatura* Lamarck, Madagascar.
- Cyclostrema cingulifera* A. Adams, Negros, Philippine Islands; Japan.  
*inflata* Sowerby, Port Elizabeth.  
*pellucida* Smith, Port Shepstone, Natal.  
*rotundata* Sowerby, Port Elizabeth.  
*semisculptum* Martens, Agulhas Bank; South Africa.
- Cylichna fragilis* Jeffreys, Spezia, Spain.  
*nitens* Smith, Fiji Islands.
- Cylindrobulla sculpta* G. and H. Nevill, Ceylon.
- Cypraea angustata* Gmelin.  
*annulus* Linnaeus, Amboyna.  
*arabica* Linnaeus, East Indies; Sunda Strait.  
*barelayi* Reeve, Mauritius.  
*caput-serpentis* Linnaeus, Mauritius.  
*carneola* Linnaeus, Asia.  
*caurica* Linnaeus.  
*clandestina* Linnaeus.  
*costata* Gmelin.  
*cribraria* Linnaeus.  
*cruenta* Gmelin.  
*erosa* Linnaeus, Mauritius and Ascension Islands.  
*felina* Gmelin.  
*fultoni* Sowerby, South Africa.  
*fuscodentata* Gray, Cape of Good Hope.  
*helvola* Linnaeus.  
*isabella* Linnaeus, Mauritius; Madagascar.  
*lamarkii* Gray, Indian Ocean.  
*listeri* Gray, Bengal.  
*lynx* Lamarck, coasts of Madagascar; Isle of France.  
*miliaris* Gmelin.  
*minorideus* Melvill, Pacific Ocean?  
*moneta* Linnaeus, Mediterranean Sea (shores of Africa).  
*nebulosa* Kiener, Cape of Good Hope.  
*neglecta* Sowerby (Mauritius; Borneo)?  
*ocellata* Linnaeus.  
*ovulata* Lamarck.

- Cypraea producta* Gaskoin.  
*quadripunctata* Gray.  
*staphylaea* Linnaeus  
*stercus-muscarum* Lamarck.  
*stolida* Linnaeus.  
*sulcata* Gaskoin, Manila, Philippine Islands.  
*tabescens* Solander, Amboyna.  
*tortirostris* Sowerby, The Kowie.  
*undata* Lamarck, Indian Ocean.  
*variolaria* Lamarck, Indian Ocean.  
*vitrea* Gaskoin, Philippine Islands.  
*ziczac* Linnaeus.
- Cypricardia angulata* Lamarck, Seas of New Holland.  
*Cyrena africana* Krauss, Gauritz River, South Africa.  
*albida* Krauss, South Africa.  
*gauritziana* Krauss, Gauritz River, South Africa.  
*olivacea* Krauss, Gauritz River, South Africa.  
*pusilla* Parreyss, upper Nile.  
*radiata* Parreyss, branch of the Nile.
- Cytherea alucinans* Sowerby, Natal.  
*compressa* Sowerby, Cape of Good Hope.  
*dolabella* Sowerby, Red Sea.  
*hebraea* Lamarck, Indian Ocean?  
*hepatica* Lamarck, Eastern Seas (les mers Australes?).  
*manillae* Sowerby, Philippine Islands.  
*nucleus* Krauss, Natal.  
*picta* Lamarck, Indian Ocean.  
*polita* Sowerby.  
*savignyi* Jonas, Red Sea.  
*subquadrata* Krauss, Knysna River, South Africa.  
*transversa* Sowerby, Natal.  
*zonaria* Lamarck, Indian Ocean.
- Daphnella minuscula* Smith, 4 miles south of Port Elizabeth; Port Alfred.  
*Delphinula granulosa* Dunker, Table Bay, South Africa.  
*Dentalium africanum* Sowerby, Natal.  
*belcheri* Sowerby, East Indian Archipelago.  
*dentalis* Linnaeus, Mediterranean.  
*glabrum* Montagu, England.  
*inflexum* Sowerby, Natal.  
*lessoni* Deshayes, New Guinea.  
*longitrorsum* Reeve, Philippine Islands.  
*novemcostatum* Lamarck, France; Mediterranean.  
*politum* Linnaeus, India.
- Diaulula capensis* Bergh, Mossel Bay.  
*Diaulula* (?) *morosa* Bergh, Mossel Bay.  
*Dione floridella* Gray, Africa; Guinea Coast.  
*Diphyllidia lineata* Otto, Indian Ocean.  
*Dolabella rumphii* Cuvier, Moluccas.  
*scapula* Martyn, Amboyna.
- Dolabrifera triangularis* Watson, Simons Bay; Cape of Good Hope.  
*Dolium costatum* Menke, Mediterranean.  
*favannii* Hanley.  
*fimbriatum* Sowerby, Manila Bay.  
*luteostoma* Kuster, Japan; Philippine Islands.

- Dolium natalensis* E. A. Smith, Durban Bluff, Natal.  
    *procellarum* Euthyme, Cape of Good Hope.  
    *variegatum* Lamarck, Seas of New Holland.
- Donax aemulus* Smith, Macusi River, near Quilimane (Mozambique).  
    *aurantiaca* Krauss, Natal.  
    *elongata* Lamarck, coasts of Africa on Atlantic Ocean.  
    *erythraensis* Bertin, Red Sea.  
    *exarata* Krauss, Natal.  
    *faba* Chemnitz, Malabar.  
    *lubrica* Hanley.  
    *madagascariensis* Wood, Madagascar.  
    *nitida* Deshayes, Moreton Bay.  
    *oweni* Gray, Africa.  
    *ringens* Lamarck, Indian Ocean.  
    *semisulcata* Hanley.  
    *spiculum*, Reeve.
- Doridium capense* Bergh, East London.
- Doriopsilla capensis* Bergh, Cape St. Blaize.
- Doriopsis caesia* Bergh, Roman Rock Lighthouse.  
    *callosa* Bergh, False Bay.  
    *capensis* Bergh, Umlanga River.
- Doris coriacea* Abraham, South Africa; Seychelles; Cape Hardy's Islands.  
    (?) *glabella* Bergh, Buffalo Bay.  
    *natalensis* Krauss, Natal.  
    (?) *perplexa* Bergh, off Cape St. Blaize.  
    (?) *pseudida* Bergh, near Table Bay.
- Dosinia consobrina* Deshayes, Cape of Good Hope.  
    *lamellata* Reeve, North Australia.  
    *lincta* Pultney, England.  
    *pubescens* Philippi, New Holland; Madagascar.
- Drillia albotessellata* Smith, Port Shepstone.  
    *cantharus* Reeve, Cebu.  
    *rugisculpta* Sowerby, The Kowie.
- Elusa natalensis* Smith, Port Shepstone.
- Engina astricta* Reeve.  
    *natalensis* Melvill, Natal.
- Epidromus crebriliratus* Sowerby, Glendower Beacon (near Port Alfred).
- Epitonium macromphalus* Smith, Tongaat, Natal.  
    *shepstonense* Smith, Port Shepstone.
- Erato guttula* Sowerby, Mauritius.  
    *sulcifera* Gray, Panama (?); Cape of Good Hope (?)
- Ervilia bisculpta* Gould, Kagosima.  
    *scaliola* Issel, Red Sea.
- Ethalia africana* Smith, Port Alfred.
- Euchelus quadricarinatus* Chemnitz, Mediterranean.
- Eulima atlantica* Smith, St. Helena.  
    *dilecta* Smith, Umkomaas, Natal.  
    *distorta* Deshayes, Grignon, France; Sicily; Britain.  
    *leptostoma* Smith, Isezela, Natal.  
    *munda* Smith, Umkomaas, Natal.  
    *natalensis* Smith, Durban.  
    *solida* Sowerby, Philippine Islands.  
    *translucida* Smith, East London.

- Euplocamus capensis* Bergh, South Africa.
- Euthria eburnea* Sowerby, Pondoland.  
*filmerae* Sowerby, Pondoland.  
*lacertina* Gould, Simons Bay.  
*magellani* Velain, St. Paul and Amsterdam.  
*pura* Martens, South Africa.  
*quekctti* Smith, Natal (10 miles from Durban).  
*simoniana* Petit, Simons Bay.
- Fasciolaria badia* Krauss, Natal.  
*filamentosa* Lamarck, Indian Ocean.  
*lugubris* Adams and Reeve, Cape of Good Hope.  
*rutila* Watson, Cape of Good Hope.
- Fenella cerithina* Philippi, Red Sea.  
*fulgida* A. Adams, British.  
*natalensis* Smith, Catos Creek, near Durban.
- Fissurella australis* Krauss, Natal.  
*caffra* Gmelin, Cape of Good Hope.  
*conoidea* Reeve, Cape of Good Hope.  
*cruciata* Krauss, Natal.  
*dubia* Reeve, Port Natal.  
*fimbriata* Reeve, Port Molle, northeast coast of Australia.  
*fumata* Reeve.  
*incarnata* Krauss, Table and False Bays, Natal.  
*neglecta* Deshayes, Mediterranean and Adriatic Seas.  
*nubecula* Linnaeus, Mediterranean Sea.  
*obtusa* Sowerby, Cape of Good Hope.  
*robusta* Sowerby, South Africa.  
*rota* Reeve, Cape of Good Hope.  
*sagittata* Reeve, Cape of Good Hope.  
*scutella* Say, Raine Island; Torres Strait.  
*sieboldi* Reeve, Japan.  
*similis* Sowerby, Australia.  
*trapezina* Krauss, Cape of Good Hope.
- Fissurellidea concatenata* Cross and Fischer, Port Lincoln.  
*hiantula* Lamarck, Indian Ocean.
- Fistulana gregata* Lamarck.
- Fossarus capensis* Pilsbry, South Africa.
- Fulgur africanus* Sowerby, Port Elizabeth.
- Fusus capensis* Dunker, Cape of Good Hope.  
*clausicaudatus* Hinds, Cape of Good Hope.  
*crenulatus* Sowerby, Cape of Good Hope.  
*lineolatus* Dunker, Cape of Good Hope.  
*mandarinus* Duclos, China Sea.  
*pyrrhostoma* Watson, off Cape of Good Hope.  
*radialis* Watson, off Cape of Good Hope.  
*robustior* Sowerby, Cape of Good Hope.  
*scrobiculatus* Dunker, Cape of Good Hope.  
*subcontractus* Sowerby, Cape Natal.  
*sulcata* Gray.  
*toreuma* Martyn, Pulo-Condore.
- Gadinia afra* Gmelin, Goree Island, Africa.
- Geitodoris capensis* Bergh, Glendower Beacon.
- Gibbula armillata* A. Adams, Australia.  
*beckeri* Sowerby, The Kowie.



- Gibbula biporcata* Sowerby, Cape Town.  
    *calyculata* Sowerby.  
    *fulgura* Gould.  
    *incincta* Sowerby, Port Elizabeth.  
    *perspectiva* Sowerby, Pondoland.  
    *townsendi* Sowerby, Mekran Coast.
- Glyphis crucifera* Pilsbry, Natal.  
    *fuscocrenulata* Smith, Port Shepstone and Umkomaas, Natal.  
    *levicostata* Smith, Tongaat and Port Shepstone, Natal.
- Gymnoplax anaglyptus* Rochebrune, Cape of Good Hope.  
    *melanotrephus* Rochebrune, Cape of Good Hope.
- Haliotis queketti* Smith, Isezela, Natal.
- Haminea gracilis* Sowerby, Durban.  
    *subcylindrica* Sowerby, Durban.
- Harpa conoidalis* Lamarck.  
    *crassa* Philippi.  
    *ventricosa* Lamarck, East Indies.
- Helix perspicua* Linnaeus.
- Hemisepius typicus* Steenstrup.
- Hipponyx acuta* Quoy, New Ireland.  
    *australis* Quoy and Gaimard, New Zealand.  
    *barbata* Sowerby, Toubouai, Society Islands.  
    *granulata* A. Adams, west coast of Africa.
- Hyalaea limbata* Orbigny, Atlantic Ocean.  
    *truncata* Krauss, False Bay, Cape of Good Hope.  
    *uncinata* Rang, Atlantic and Indian Oceans.
- Hydatina circulata* Martyn, Tranquebar.  
    *undata* Bruguiere, Tranquebar.
- Iacra seychellarum* H. and A. Adams, Seychelles Islands.
- Ianthina balteata* Reeve, Cape of Good Hope.  
    *nitens* Menke.  
    *pallida* Harvey, Europe.  
    *prolongata* Blainville.  
    *umbilicata* Orbigny, Cuba.
- Idaliella amoenula* Bergh, Gordons Bay.
- Iridina wahlbergi* Krauss, Limpopo River.
- Ischnochiton elizabethensis* Pilsbry, Port Elizabeth.  
    *lentiginosus* Sowerby.
- Janus capensis* Bergh, False Bay and Buffalo Bay.
- Kalinga ornata* Alder and Hancock, Coromandel coast (India).
- Kellia macandrewi* Fischer, North Spain.  
    *mactroides* Hanley, Cape of Good Hope.  
    *natalensis* Smith, Durban.
- Lamellaria mauritiana* Bergh, Mauritius?
- Lampusia murrayi* Smith, off Cape of Good Hope.
- Latiaris tortilis* H. and A. Adams, China.
- Latirus abnormis* Sowerby, Natal.  
    *alboapicata* Smith, Durban.  
    *imbricatus* Sowerby, Tugela River mouth, Cape of Good Hope.
- Leucotina elongata* Sowerby, Port Elizabeth.  
    *natalensis* Smith, Isezela, Natal.
- Libitina angulata* Lamarck.
- Lima multicosata* Sowerby, Mediterranean?  
    *squamosa* Lamarck, America.  
    *tenera* Turton, England.

- Limopsis natalensis* Krauss, Natal.  
*Liotia bicarinata* Martens, near Agulhas Bank, South Africa.  
     *pulcherrima* A. Adams, Cape of Good Hope.  
*Lippistes carnu* Gmelin, Cape of Good Hope.  
*Littorina aspera* Philippi, America.  
     *decollata* Krauss, Natal.  
     *glabrata* Philippi, Payta, Peru, and Cape Natal.  
     *intermedia* Philippi, Red Sea; Natal; Swan Point; New Holland; Pacific Ocean.  
     *laevis* Philippi.  
     *natalensis* Krauss, Natal.  
     *newcombi* Reeve, Hawaiian Islands.  
     *pintado* Wood, Hawaiian Islands.  
     *punctata* Deshayes, Senegal.  
     *ziczac* Chemnitz, Sugar Islands?  
*Loligo burnupi* Smith, Port Shepstone.  
     *reynaudi* Orbigny, Atlantic Ocean; Cape of Good Hope.  
*Loripes rosacea* Smith, Durban.  
*Lotorium cingulatum* Lamarck.  
     *decipiens* Reeve, Mindanao.  
     *durbanense* Smith, Durban.  
     *gracile* Reeve, Philippine Islands.  
     *nassariforme* Sowerby, Natal.  
     *ranelloides* Reeve, Luzon, Philippine Islands.  
*Lucina columbella* Lamarck, Touraine and Bordeaux (fossil).  
     *dalliana* Vanatta, South Africa.  
     *exasperata* Reeve, Indian Ocean.  
     *fragilis* Philippi, Panormi, Bay of Naples.  
     *lactea* Lamarck, Mediterranean.  
     *liratula* Sowerby, South Africa.  
     *pecten* Lamarck, Senegal  
     *quadrisulcata* Orbigny.  
*Luponia castanea* Higgins, Southeastern Africa.  
*Lutraria intermedia* Sowerby, British?  
     *oblonga* Chemnitz.  
*Macoma retrorsa* Sowerby, Durban.  
*Macroschisma compressa* A. Adams.  
     *producta* A. Adams, Australia.  
*Mactra achatina* Chemnitz, Tranquebar?; Ceylon?; Nicobar?  
     *australis* Lamarck, Seas of New Holland.  
     *capensis* Sowerby, Port Elizabeth.  
     *glabrata* Linnaeus, African Ocean?  
     *ovalina* Lamarck, Indian Ocean.  
     *polita* Chemnitz, East Indies.  
*Malleus legumen* Reeve, Philippine Islands.  
     *tigrinis* Reeve, Moluccas.  
*Mangilia africana* Sowerby, Umhloti River, mouth (Natal).  
     *beckeri* Sowerby, The Kowie.  
     *casta* Reeve.  
     *cerea* Carpenter?, Panama.  
     *clathrata* de Serras, Mediterranean.  
     *costata* Donovan, England.

*Mangilia elizabethae* Smith, 4 miles south of Port Elizabeth.

*shepstonensis* Smith, Port Shepstone.

*striolata* Scacchi, Spain.

*Margarita dilecta* A. Adams, Straits of Magellan.

*Margaritifera vulgaris* Schumacher.

*Marginella albanyana* Gaskoin, Albany, Africa.

*angustata* Sowerby, Cape Point.

*bensoni* Reeve, Green Point, Cape of Good Hope.

*biplicata* Krauss, Cape of Good Hope.

*bulbosa* Reeve, Borneo.

*chrysea* Watson, Sea Point, Cape Town.

*cinera* Jousseaume.

*corusca* Reeve, Singapore.

*crassilabrum* Sowerby, West Indies.

*cystiscus* Redfield, Cape of Good Hope.

*diadochus* Adams and Reeve, Sunda Strait.

*dunkeri* Krauss, Cape of Good Hope.

*electrina* Sowerby, Port Elizabeth.

*epignus* Reeve, Mogadore, Morocco.

*floccata* Sowerby, South Africa.

*fusiformis* Hinds, Strait of Malacca.

*inconspicua* Sowerby.

*ingloria* Smith, Kowie, Cape Colony.

*interrupta* Lamarck.

*labrosa* Redfield, West Indies.

*lineato-labrum* Gaskoin.

*lucida* Marrat, Natal.

*metcalfei* Angas, Port Jackson.

*multizonata* Krauss, Cape of Good Hope.

*newcombi* Reeve, Agulhas Bank, Cape of Good Hope.

*paxillus* Reeve.

*pellicula* Weinkauff, Natal Coast.

*perminima* Sowerby, South Africa.

*ponsonbyi*, Sowerby South Africa.

*poucheti* Petit, West Africa.

*pseustes* Smith, Port Alfred.

*quadrifasciata* Marrat, Kabenda, Africa (30 miles north of the Congo).

*reevei* Krauss, Cape of Good Hope.

*ros* Reeve.

*rufula* Gaskoin.

*savignyi* Issel, Red Sea.

*seminula* Gould, False Bay, Cape of Good Hope.

*shepstonensis* Smith, Port Shepstone.

*Marsenia capensis* Bergh, Cape Point; Lion's Head.

*leptoconcha* Bergh, off Cape Point.

*Megalocranchia maxima* Pfeffer, Cape of Good Hope.

*Megalebennus sella* Sowerby, South Africa.

*Melania nitida* Lamarck, Fossile de Grignon et de Parnes.

*Melapium elatum* Schubert and Wagner, East Indies.

*Melibe rosea* Rang, Cape of Good Hope.

*Minolia congener* Sowerby, Cape Infanta; Cape Blaize.

*Miralda crispa* Sowerby, Port Elizabeth.

*Mitra aerumnosa* Melvill, Algoa Bay, South Africa.

*alauda* Sowerby, Mauritius.

*bovei* Kiener, Red Sea.

*cadaverosa* Reeve, Philippine Islands; Lord Hoods Islands.

*carbonacea* Hinds, Cape of Good Hope.

*chinensis* Gray, China.

*circula* Kiener.

*cratilia* A. Adams, South Africa.

*crenifera* Lamarck, Indian Ocean.

*crenulata* Lamarck, Indian Ocean.

*cylindracea* Reeve.

*daedala* Reeve, Ticao, Philippine Islands.

*episcopalis* Linnaeus.

*exasperata* Gmelin, Indian Ocean.

*flammea* Quoy, Moluccas.

*flammigera* Reeve.

*fuscescens* Pease, Hawaiian Islands.

*interlirata* Reeve, Masbate, Philippine Islands.

*limbifera* Lamarck.

*litterata* Lamarck, Indian Ocean.

*luctuosa* A. Adams, Mauritius.

*obeliscus* Reeve, Negros, Philippine Islands.

*paupercula* Linnaeus, Philippine Islands.

*pecta* Reeve.

*pica* Reeve.

*pretiosa* Reeve.

*punctostriata* A. Adams, Ceylon.

*rufescens* A. Adams, China Seas.

*schroeteri* Dillwyn.

*texturata* Lamarck.

*zephyrina* Duclos, Mauritius.

*Modiola cylindrica* Krauss, Natal.

*elegans* Gmelin, West Africa.

*mucronata* Philippi, Java.

*petagnae* Scacchi, Malta.

*rhomboidea* Hanley, The Gambia, West Africa; Tugela River, South Africa.

*Modiolaria cumingiana* Dunker, Australia.

*marmorata* Forbes, British.

*Monodonta australis* Deshayes, New Holland.

*Monoptygma casta* A. Adams, China Seas.

*Montacuta capensis* Sowerby, South Africa.

*natalensis* Smith, Umkomaas, Natal.

*Mormula macandreae* A. Adams, Gulf of Suez.

*rissoina* A. Adams, Japan.

*Murex aricornis* Lamarck, Moluccas.

*banksii* Sowerby, Moluccas.

*brevispina* Lamarck.

*capensis* Sowerby, Cape of Good Hope.

*concatenatus* Lamarck, Isle of France.

*dunkeri* Krauss, Cape of Good Hope.

*fallax* Smith, Natal (10 miles from Durban).

*mitraeformis* Sowerby.

*polygonus* Gmelin, Indian Ocean.

*ramosus* Linnaeus, Jamaica.  
*ricinus* Linnaeus, Asia.  
*septangularis* Montagu, England.  
*trapezium* Linnaeus, Amboyna.  
*trivialis* A. Adams.  
*tubercularis* Montagu, England.  
*tuberculatum* Linnaeus.  
*turbinellus* Linnaeus, Asia.  
*undatum* Chemnitz, Tranquebar.  
*wahlbergi* Krauss, Natal.

*Mya suborbicularis* Montagu, England.

*Mytilus afer* Gmelin, Mediterranean.

*capensis* Dunker, Cape of Good Hope.  
*crenatus* Lamarck, Caroline Islands.  
*discors* Linnaeus, Islands of Norway.  
*elongata* Krauss, Natal; South America.  
*magellanicus* Chemnitz, Straits of Magellan.  
*nicobaricus* Chemnitz, Nicobar Islands.  
*semistriata* Krauss, Natal coast.

*Nassa algida* Reeve, Moreton Bay, Australia.

*analogica* Sowerby, Cape Infanta.  
*bicallosa* Smith, West Australia; Swan River; Cape Natal.  
*circumtexta* Martens, Plettenberg Bay; Francis Bay, South Africa.  
*coccinea* A. Adams Mss.?  
*desmoulioides* Sowerby, Umhloti River, mouth (Natal).  
*elata* Gould, Liberia.  
*eusulcata* Sowerby, Tugela River, mouth.  
*fenestrata* Marrat.  
*filmerae* Sowerby, Pondoland.  
*filosa* Gray, Philippine Islands.  
*gaudiosa* Hinds, Malacca.  
*gemmulata* Lamarck.  
*incrassata* Muller, Denmark.  
*lentiginosa* A. Adams, Masbate.  
*margaritifera* Dunker.  
*myristica* Hinds, Cape of Good Hope.  
*natalensis* Smith, Natal.  
*plicatella* A. Adams, Wallwich Bay, Africa.  
*producta* Sowerby, Durban.  
*pulchella* A. Adams, Cape of Good Hope.  
*serotina* A. Adams, Australia.  
*spurca* Gould, Simons Bay.  
*sulcifera* A. Adams, Algoa Bay.  
*trifasciata* A. Adams, Vigo Bay.  
*turbinea* Gould, Liberia.

*Nassaria gracilis* Sowerby, Tugela River, mouth.

*Natica areolata* Recluz, Capul, Philippine Islands.

*burnupi* Smith, Durban Bay.  
*cancellata* Lamarck, West Indies.  
*didyma* Bolten.  
*genuanus* Reeve, South Africa.  
*kraussi* Smith, Durban, Natal; Mauritius.  
*lamarcki* Reeve.  
*lurida* Philippi, Sicily.



- Natica mamilla* Lamarck, Indian Ocean.  
*marochiensis* Gmelin, Africa; Morocco; Antilles.  
*psila* Watson, off Cape of Good Hope.  
*pygmaea* Philippi  
*sagraiana* Orbigny, Cuba.  
*sebae* Souleyet.  
*simplex* Sowerby, South Africa.  
*taeniata* Menke.  
*zanzibarica* Recluz, Zanzibar.
- Neaera capensis* Smith, Cape of Good Hope.  
*Nembrotha capensis* Bergh, Kalk Bay.  
*Necocardia angulata* Sowerby, Port Elizabeth.  
*Neptuneopsis gilchristi* Sowerby, Cape of Good Hope.  
*Nerita aterrima* Gmelin, Philippine Islands.  
*comma-notata* Reeve, West Indies.  
*exuvia* Linnaeus, America; Asia.  
*fasciata* Krauss, Natal coast.  
*listeri* Recluz, West Indies.  
*melanostoma* Gmelin, Indian Ocean.  
*papilla* Gmelin, Tranquebar.  
*plexa* Chemnitz, Tranquebar.  
*plicata* Linnaeus.  
*polita* Linnaeus, Asia.  
*quadricolor* Gmelin, Red Sea.  
*sanguinolenta* Menke, Philippine Islands; Mauritius.  
*textilis* Gmelin.  
*umlaasiana* Krauss, Knysna River.
- Neritina crepidularia* Lamarck.  
*natalensis* Reeve, Natal.  
*zebra* Lamarck, Central America.
- Niso interrupta* Sowerby, Central America.
- Nucula belcheri* Hinds, Cape of Good Hope.  
*bicuspidata* Gould, Liberia.  
*irregularis* Sowerby, Struis Point.  
*pulchra* Hinds, Cape of Good Hope.  
*radiata* Forbes and Hanley, British.
- Nuculana compta* Sowerby, Cape Natal.  
*gemmulata* Sowerby, mouths of Tugela and Umhloté Rivers.  
*lamellata* Sowerby, Cape Natal.
- Nuculina ovalis* Smith, Cape of Good Hope.  
*pretiosa* Gould, Simons Bay.
- Obeliscus aciculatus* A. Adams, Philippine Islands.  
*sulcatus* A. Adams, Tahiti.  
*teres* A. Adams, Philippine Islands.
- Ocenebra natalensis* Smith, Umkomaas and Port Shepstone.
- Octopus argus* Krauss, Natal.  
*vulgaris* Lamarck, European seas.
- Odostomella robusta* Sowerby, The Kowie.
- Odostomia angasi* Tryon, Australia.  
*chitonicola* Smith, Umkomaas, Natal.
- Oliva bulbosa* Marrat.  
*caerulea* Bolten.  
*capensis* Sowerby, Cape of Good Hope.

- Oliva dactyliola* Duclos, Moluccas.  
*elegans* Lamarck, Ceylon.  
*nana* Lamarck, America.  
*paxillus* Reeve.  
*picta* Reeve, Philippine Islands.  
*scitula* Marrat.  
*truncata* Marrat, Cape of Good Hope.
- Ommatostrephes oualaniensis* Lesson, Oualan Island (Caroline Islands).  
*Onchidium burnupi* Collinge, Umlaas Lagoon, Natal.  
*Oncidium peroni* Cuvier, Isle of France.  
*Oniscia macandrewi* Sowerby, Japan.  
*Onithochiton alveolatum* Rochebrune, Cape of Good Hope.  
*isipingoensis* Sykes, Isipingo, South Africa.
- Oscaniella nigropunctata* Bergh, off Cape Infanta.  
*Oscaniopsis pleurobranchiana* Bergh, Tugela River.  
*Ostrea cucullata* Born, Ascension Island.  
*echinata* Quoy and Gaimard, Amboyna.  
*lacerata* Hanley, Senegal?  
*lentiginosa* Sowerby.  
*parasitica* Chemnitz, Cape of Good Hope or East Indies.  
*prismatica* Gray.  
*pusio* Linnaeus, Australia.  
*rosacea* Deshayes, Senegal.  
*rufa* Lamarck, America.  
*senegalensis* Gmelin, West Africa.  
*tuberculata* Lamarck, Timor Island.
- Ovula carnea* Lamarck, Mediterranean and coasts of Barbary.  
*Oxynoë pellucidus* A. Adams.
- Palio* (?) *capensis* Quoy and Gaimard, Cape of Good Hope.  
*Paludina knysnaensis* Krauss, Knysna River and Zoetendals Valley.  
*Pandora dissimilis* Sowerby, Sea Point, Cape Town.  
*similis* Sowerby, Durban.
- Panopea natalensis* Woodward, Port Natal.  
*Paraplysia lowii* Gilchrist.
- Parmophorus imbricatus* Quoy, New Ireland.  
*Patella albonotata* Smith, Umkomaas, Natal.  
*chinensis* Linnaeus, Mediterranean.  
*concolor* Krauss, Natal.  
*decemcostata* Smith, Algoa Bay.  
*echinulata* Krauss, Table Bay.  
*exarata* Nuttall, California.  
*fasciata* Krauss, Natal.  
*graeca* Linnaeus, Mediterranean.  
*maculata* Blainville, Cape of Good Hope.  
*morbida* Reeve, Cape of Good Hope.  
*natalensis* Krauss, Natal.  
*nigroalba* Blainville, Cape of Good Hope.  
*obtecta* Krauss, Table Bay.  
*patriarcha* Pilsbry, Cape of Good Hope.  
*plicata* Born, Strait of Magellan.  
*radiata* Krauss, Natal.  
*rustica* Linnaeus.  
*safiana* Lamarck, Morocco.  
*sanguinans* Reeve, Cape Natal.

- Patella schroeteri* Krauss, Shore of Elim and Saldanha Bay.  
*tabularis* Krauss, Table Bay.  
*testudinaria* Linnaeus.  
*umbella* Gmelin, Africa.
- Pecten capensis* Gray, Cape of Good Hope; Port Elizabeth.  
*limatula* Reeve.  
*squamosus* Gmelin.  
*tinctus* Reeve.
- Pectunculus belcheri* Adams and Reeve, Cape of Good Hope.  
*bicolor* Reeve, Gulf of California.  
*castaneus* Lamarck, American Seas.  
*inaequalis* Sowerby, Panama; Real Dejos.
- Pedicularia sicula* Swainson.
- Peristernia fenestrata* Gould, Simons Bay, Cape of Good Hope.
- Perna anomioidea* Reeve, California.  
*dentifera* Krauss, Natal.  
*vulsella* Lamarck, Seas of India; America.
- Petalocochus octosectus* Carpenter.
- Petricola cordieri* Deshayes, California.  
*cultellus* Deshayes, Ceylon.  
*robusta* Sowerby, Panama.  
*typica* Jonas, St. Thomas Island.  
*ventricosa* Krauss, Natal.
- Phasianella kraussi* Smith, Kalk Bay; False Bay, Cape of Good Hope.  
*tenuis* Philippi, Sicily.
- Philine berghi* Smith.
- Pholas branchiata* Gould, Liberia.  
*dactylus* Linnaeus, Europe.  
*falcata* Reeve, Hudson Bay.  
*fragilis* Sowerby, Samar, Philippine Islands.
- Phorus corrugatus* Reeve.
- Phos laevigatus* A. Adams, China.  
*roseatus* Hinds, Sumatra.
- Photina nigra* A. Adams.
- Physopsis africana* Krauss, Port Natal.
- Pileopsis pilosus* Deshayes.
- Pinaxia coronata* A. Adams, Philippine Islands.
- Pinna aequilatera* Martens.  
*madida* Reeve, Port Essington, New Holland.  
*natalensis* Smith, Durban.  
*pernula* Chemnitz, St. Croix (West Indies).  
*saccata* Linnaeus, Mediterranean; East Indies?  
*serra* Reeve, Moreton Bay.  
*squamosissima* Philippi, South Carolina.  
*vexillum* Born.
- Pisania crenilabrum* A. Adams, West Indies.  
*tritonoides* Reeve, Ticao, Philippine Islands.
- Planaxis acuta* Krauss, Natal.  
*sulcata* Quoy and Gaimard, Amboyna and Mauritius.
- Plaxiphora parva* Nierstrasz, Mozambique.  
*setigera* King, Cape Horn.
- Pleurobranchaea melanopus* Bergh, off Cape Point.
- Pleurobranchus capensis* Vayssiere, Cape of Good Hope.  
*granulatus* Krauss, False Bay, Cape of Good Hope.

*Pleurophyllidia capensis* Bergh, East London.

*euchroa* Bergh, off Cape Hong Klip and Buffalo Bay.

*gilchristi* Bergh, Sebastian Bluff, Cape St. Blaize, Cape Point.

*microdonta* Bergh, off Constable Hill.

*natalensis* Bergh, Cape of Good Hope.

*Pleurotoma anteridion* Watson, off Cape of Good Hope.

*balacformis* Sowerby, Vasco da Gama Peak.

*bijubata* Reeve, Burias, Philippine Islands.

*burnupi* Sowerby, Durban.

*capensis* Smith, Port Elizabeth.

*castanea* Reeve.

*cingulifera* Lamarck.

*fossata* Sowerby, Cape Vidal, Natal.

*fucata* Reeve.

*fulgurans* Krauss, Knysna.

*gilchristi* Sowerby, Tugela River, Cape of Good Hope.

*gravis* Hinds, Cape of Good Hope.

*inclinata* Sowerby, Mauritius.

*kraussii* Smith, Cape of Good Hope.

*lignaria* Sowerby, Lion's Head, Cape of Good Hope.

*lobata* Sowerby, Cape Natal and Buffalo River.

*marmorata* Lamarck.

*monilifera* Pease, Hawaiian Islands.

*nux* Reeve, Cape of Good Hope.

*rubinicolor* Reeve.

*scitecostata* Sowerby, Glendower Beacon (near Port Alfred).

*sigillata* Reeve.

*stolida* Hinds, Cape of Good Hope.

*tigrina* Lamarck.

*tripartita* Smith, South Africa.

*tumida* Sowerby, Agulhas Bank, South Africa.

*turriplana* Sowerby, Cape St. Blaize.

*vertebrata* Smith, Persian Gulf.

*wilkieae* Sowerby, Port Elizabeth.

*Plicatula australis* Lamarck, Seas of New Holland; Island of Fourneau.

*Polypus capensis* Eydoux and Souleyet, Cape of Good Hope.

*horridus* Orbigny, Red Sea.

*rugosus* Bosc, Senegal.

*Poromya curta* Sowerby, Cape Natal.

*gilchristi* Sowerby, Umtualumi River, mouth.

*granosissima* Sowerby, Cape Natal.

*striata* Sowerby, Vasco da Gama Peak (False Bay).

*Poronia australis* Sowerby, Baie Boisée (Nouvelle Calédonie).

*Psammobia corrugata* Deshayes, Cebu, Philippine Islands.

*figlina* Gould, Liberia.

*ornata* Deshayes, Ticao, Philippine Islands.

*pallida* Deshayes, Red Sea.

*Psammotæa donacioides* Reeve, Port Adelaide, Australia.

*lunulata* Deshayes, Philippine Islands.

*Pseudoliva ancilla* Hanley, Caffraria.

*Pseudomurex meyendorffi* Calcara.

*Puncturella fastigiata* A. Adams, Eastern Seas.

*noachina* Linnaeus.

*Purpura anaxares* Duclos.

- arachnoides* Lamarck, Indian Ocean.
- bufo* Lamarck, Seas of India ?
- cancellatum* Quoy and Gaimard, Tonga Labu.
- cingulata* Linnaeus, Iceland.
- clathrata* Blainville, Cape of Good Hope.
- dubia* Krauss, Cape of Good Hope.
- elata* Blainville, New Holland.
- fiscellum* Lamarck, China Seas.
- granulata* Duclos, New Holland.
- heptagonalis* Reeve, Panama.
- lapillus* Lamarck, Seas of Europe.
- luteostoma* Deshayes.
- mancinella* Lamarck, East Indian Seas.
- marginatum* Blainville, New Hebrides.
- ovalis* Blainville, Cape of Good Hope.
- persica* Lamarck, Oceans of India.
- pura* Smith, Unkomaas.
- rudolphi* Lamarck, Oceans of India.
- scobina* Quoy, New Zealand.
- succincta* Lamarck, Seas of New Zealand.
- trigona* Reeve, China and Malacca.
- vexillum* Lamarck, Indian Ocean.
- wahlbergi* Krauss, Natal.
- zeyheri* Krauss, Cape of Good Hope.

*Pyramidella mitralis* A. Adams, Philippine Islands.*Pyrazus palustris* Bruguiere, East Indies; Australia.*Pyrula ficoïdes* Lamarck.

- lineata* Lamarck.
- paradisiaca* Reeve, Ceylon; Mozambique.

*Radius gracillimus* Smith, near Durban.*Raeta pellicula* Deshayes, Japan.*Ranella affinis* Broderip, Annoa Island, Pacific Ocean.

- anceps* Lamarck.
- crumena* Lamarck, India ?
- granifera* Lamarck.
- lamellosa* Dunker, Japan.
- leucostoma* Lamarck, New Holland.
- livida* Reeve, Annoa Island, Pacific Ocean.
- pusilla* Broderip, Pacific Ocean (Lord Hoods Island).
- semigranosa* Lamarck.
- siphonata* Reeve, Philippine Islands.

*Rapana nodosa* A. Adams, Philippine Islands.*Ricinula aspera* Lamarck.

- morus* Lamarck, Isle of France.
- muticus* Lamarck.

*Rissoa adjacens* Smith, 4 miles south of Port Elizabeth.

- crawfordi* Smith, Algoa Bay.
- elegantula* Angas, Aldinga Bay.
- farquhari* Smith, 4 miles south of Port Elizabeth.
- nigra* Krauss, Algoa and Table Bays.

*Rissoina ambigua* Gould, Clermont, Tonnere Island.

- annulata* Dunker, Japan.
- crassa* Angas, Port Jackson.



- Rissoina durbanensis* Smith, Durban.  
    *shepstonensis* Smith, Port Shepstone.
- Ruma simiae* Chemnitz, East Indies; Philippine Islands.
- Saxicava arctica* Gmelin.  
    *australis* Lamarck, Kangaroo Island.  
    *flaccida* Gould, Hong Kong and Simons Bay.
- Scala aculeata* Sowerby, Philippine Islands, China, etc.  
    *bullata* Sowerby, Capul Island, Philippine Islands.  
    *eborea* Smith, Port Shepstone; Durban.  
    *millecostata* Pease, Hawaiian Islands.  
    *robillardi* Sowerby, Mauritius.
- Scalaria clathratula* Montagu, England.  
    *clathrus* Sowerby, Mediterranean Sea; West Indies.  
    *coronata* Lamarck.  
    *fragilis* Hanley, West Indies.  
    *fucata* Pease, Hawaiian Islands.  
    *jukesiana* Forbes, Australia.  
    *lactea* Krauss, Natal.  
    *pseudo-scalaris* Brocchi.  
    *replicata* Sowerby, Lord Hoods Island.  
    *simplex* Sowerby, Natal.
- Scintilla compta* Sowerby, Durban.  
    *durbanensis* Sowerby, Durban.  
    *elongata* Sowerby, Durban.  
    *queketti* Sowerby, Durban.  
    *turgida* Deshayes, Samar, Philippine Islands.
- Scutum imbricatum* Quoy and Gaimard, New Holland.  
    *unguis* Linnaeus, Amboyna.
- Semele cordiformis* Reeve, Indian Ocean.
- Separatista grayi* A. Adams, Cape of Good Hope.
- Sepia australis* Quoy and Gaimard, Agulhas Bank, South Africa.  
    *burnupi* Hoyle, Natal.  
    *capensis* Orbigny, Cape of Good Hope.  
    *hierredda* Rang, Goree (Africa).  
    *jousseumei* Rochebrune, Cape of Good Hope.  
    *papillata* Quoy and Gaimard, Cape of Good Hope.  
    *vermiculata* Quoy and Gaimard, Cape of Good Hope.
- Sepioteuthis major* Gray.
- Sigaretus delesserti* Recluz, Philippine Islands.  
    *planulatus* Recluz, Luzon, Philippine Islands; Australia.
- Siliqua japonica* Dunker, Japan.  
    *polita* Wood.
- Siliquaria obtusa* Schumacher, Mediterranean Sea.
- Siphonaria albofasciata* Krauss, Natal Point.  
    *cyaneomaculata* Sowerby, The Kowie.  
    *natalensis* Krauss, Natal.  
    *nigerrima* H. Adams, Umhloti River, Natal.  
    *tenuicostulata* Smith, Umhloti River, Natal.  
    *variabilis* Krauss, Table Bay; off shore of Natal.
- Sistrum affine* Pease, Kingsmill Islands.  
    *coronatum* H. Adams, Barkly Island; Mauritius.  
    *elongatum* Blainville.  
    *lividum* Reeve, Negros, Philippine Islands.  
    *parvulum* Gould, Simons Bay, Cape of Good Hope.

- Sistrum squamiliratum* Smith, Isipingo.  
*squamosum* Pease, Kingsmill Islands.
- Solariella beckeri* Sowerby, The Kowie.  
*infundibulum* Watson, Agulhas Bank, South Africa.  
*perseulpta* Sowerby, Cape Natal.  
*sculpta* Sowerby, Durban.  
*splendens* Sowerby, Natal.  
*undata* Sowerby, Agulhas Bank, South Africa.
- Solarium caelatum* Hinds, *cancellatum* Krauss, Algoa Bay.  
*cingulum* Kiener, Indian Ocean.  
*cylindraceum* Dillwyn, West Indies.  
*dorsuosum* Hinds, Philippine Islands.  
*laevigatum* Lamarck.  
*maximum* Philippi.  
*trochoides* Deshayes, Philippine Islands.  
*variegatum* Gmelin.
- Solen corneus* Lamarck, Java.  
*gouldi* Conrad, America?  
*legumen* Linnaeus, Mediterranean Sea.  
*marginatus* Koch, Africa.  
*regularis* Dunker, Malacca.  
*rosea* Gmelin, Red Sea.  
*sloanei* Gray.  
*vespertina* Gmelin, Atlantic Ocean; Mediterranean Sea.
- Solenomya togata* Poli.
- Solidula tessellata* Reeve, Red Sea.
- Sphenia decurtata* A. Adams, Luzon; Catanuan, Tayabas Province, Philippine Islands.  
*mindorensis* Adams and Reeve, Mindoro.  
*natalensis* Smith, Durban.  
*philippinarum* A. Adams, Sibunga, Zebu; Manila Bay, Luzon.
- Spiroglyphus spirorbis* Sowerby.
- Spirula solandri* Gray.
- Spondylus ducalis* Chemnitz, East Indies.  
*nicobaricus* Chemnitz, Nicobar Islands.
- Staurodoris verrucosa* Bergh, St. James.
- Stomatella articulata* A. Adams, Australia; Lord Hoods Island; South Seas.  
*cancellata* Krauss, Table Bay.  
*sulcifera* Lamarck, Seas of New Holland.
- Strigilla trotteriana* Sowerby, Durban.
- Strombus floridus* Lamarck, Indian Ocean; Moluccas.  
*fusiformis* Sowerby.  
*gibberulus* Linnaeus, Asia.  
*lamarckii* Gray, East Indies.  
*lentiginosus* Linnaeus, Asia.  
*mauritianus* Lamarck, Mauritius.
- Sunetta contempta* Smith.
- Tapes cumingii* Sowerby, Philippine Islands.  
*dactyloides* Sowerby, Luzon.  
*deshayesii* Hanley, Philippine Islands.  
*kochi* Philippi.  
*kraussii* Deshayes, Port Natal.  
*pullastra* Montagu, Devonshire.  
*textrix* Chemnitz, Malabar.

*Teinostoma lucidum* A. Adams, Japan.

*Tellimya paula* A. Adams, Torres Strait, Australia.

*peculiaris* A. Adams, Ceylon.

*similis* Smith, Port Alfred.

*Tellina africana* Sowerby, Algoa Bay.

*analogica* Sowerby, Constable Hill, Saldanha Bay.

*calcareo* Chemnitz, Ferro Islands.

*candidata* Sowerby, Durban.

*capsoides* Lamarck, Negros, Philippine Islands; St. Pierre and St. Francis.

*crawfordi* Sowerby, Port Elizabeth.

*cumana* Hanley, Mediterranean.

*dispar* Conrad, Philippine Islands; Hawaiian Islands.

*exculpta* Gould, Fiji Islands.

*fabula* Gmelin, Norwegian Seas; Mediterranean; Atlantic.

*gilchristi* Sowerby, off Cape Point Lighthouse.

*inclinata* Sowerby, Tugela River, mouth.

*levior* Sowerby, Amatikulu River, South Head, Tugela River.

*litoralis* Krauss, Natal; Cape of Good Hope.

*ludwigii* Krauss, Natal.

*nobilis* Hanley, Luzon.

*ordinaria* Sowerby, Saldanha Bay.

*pcrna* Spengler, Indian Ocean.

*pharaonis* Hanley, Red Sea.

*planissima* Anton.

*prismatica* Sowerby, Durban.

*pristis* Lamarck, Indian Ocean.

*queketti* Sowerby, Durban.

*rastellum* Hanley, Zanzibar.

*rhomboides* Quoy and Gaimard.

*rosea* Spengler, Indian Ocean.

*rotundata* Montagu, Devonshire.

*rousi* Sowerby, Port Elizabeth.

*semen* Hanley, Corregidor, Philippine Islands.

*semilaevis* Martens, Red Sea.

*tenuis* Da Costa, England.

*umbonella* Lamarck, King Island, New Holland.

*venusta* Deshayes, Sandwich Islands.

*virgata* Linnaeus, Indian Ocean.

*virgulata* Hanley.

*vulsella* Chemnitz, East Indies.

*Terebra affinis* Gray.

*apicina* ? Deshayes, Singapore.

*archimedes* Deshayes.

*babylonia* Lamarck.

*casta* Hinds, Iloilo, Panay, Philippine Islands.

*cingulifera*, Lamarck.

*cuspidata* Hinds, Cape coast, Africa.

*dimidiata* Lamarck, Indian Ocean; Moluccas.

*evoluta* Deshayes, Japan.

*fictilis* Hinds, Australia.

*filmerae* Sowerby, Pondoland.

*geminata* Deshayes, Cape Natal.

*grayi* Smith.

*lightfooti* Smith, Table Bay.

*Terebra laevigata* Gray.*livida* Reeve, Philippine Islands.*loisae* Smith, Umkomaas, Natal.*longiscata* Deshayes, Philippine Islands.*macandrewii* Smith, Persian Gulf.*monilis* Quoy and Gaimard, Mariana and Caroline Islands.*natalensis* Smith, Umkomaas, Natal.*nebulosa* Sowerby.*pertusa* Born.*raphanula* Lamarck.*rufopunctata* Smith.*straminea* Gray.*subulata* Lamarck, Indian Ocean.*textilis* Hinds, Bay of Manila, Philippine Islands; Strait of Macassar.*thyrsaca* Melvill, Karachi; Mekran coast.*tiarella* Deshayes, Cape Natal.*Tethys burnupi* Burne, Durban.*elongata* Pease, Hawaiian Islands.*nigrocincta* Martens.*operta* Burne.*Thordisa punctulifera* Bergh, False Bay.*Thracia capensis* Sowerby, South Africa.*Thylacodes natalensis* Mörch, Natal.*Tichogonia kraussii* Kuster, Natal.*Tivela natalensis* Dunker, Natal.*rejecta* Smith, South Africa.*Tornatella suturalis* A. Adams, Japan; Puerto Galero; Mindoro.*Tornatina meridionalis* Smith, Natal.*Tridacna elongata*? Philippine Islands.*Triphora burnupi* Smith, Durban.*carteretensis* Hinds, Port Carteret, New Ireland.*cingulatus* A. Adams, Red Sea.*corrugatus* Hinds, New Guinea; Straits of Malacca.*Triopa lucida* Stimpson, Simons Bay; Cape of Good Hope.*Triton acuminata* Reeve, China.*aegrota* Reeve, China.*africana* A. Adams, Africa?*anus* Lamarck, Indian Ocean.*aquatilis* Reeve, Ticao, Philippine Islands.*australe* Lamarck, near Botany Bay, New Holland.*bractaetus* Hinds, Marquesas; New Ireland; Straits of Malacca.*chlorostoma* Lamarck, Antilles.*cutaceus* Linnaeus.*cynocephalum* Lamarck.*elongatum* Reeve, Philippine Islands.*encausticum* Reeve, Ticao, Philippine Islands.*exaratus* Reeve, New Holland.*fictilis* Hinds, Cape of Good Hope.*gallinago* Reeve, Mindanao, Philippine Islands.*gemmatus* Reeve, Ticao, Philippine Islands.*labiosus* Wood.*lampas* Lamarck, Seas of India.*monilifer* Adams and Reeve, Eastern Seas.*nitidulus* Sowerby, Port Elizabeth.*nodiferus* Lamarck, Atlantic Ocean; Mediterranean Sea.

*Triton pileare* Lamarck, Antilles.

*pyrum* Reeve, Ticao, Philippine Islands.

*rubecula* Lamarck, Equatorial?

*sauliae* Reeve, Luzon, Philippine Islands.

*tuberosus* Lamarck, Indian Ocean?

*vespaceum* Lamarck.

*Tritonia indecora*, Bergh off Cape Point.

*pallida* Smith, False Bay, Cape of Good Hope.

*Tritonidca minor* Sowerby, Cape of Good Hope.

*natalensis* Smith, Durban.

*subrubiginosa* Smith, Japan.

*Tritonidoxa capensis* Bergh, off Glendower Beacon.

*Tritonium pustulatum* Euthyme, Cape of Good Hope.

*Trivia insecta* Mighels, Sandwich Islands.

*oryza* Lamarck, Asia; Timor; Senegal.

*Trochita solida* Reeve, Conchagua, Central America.

*Trochus bicingulatum* Lamarck, Seas of Martinique.

*depressus* Gmelin, Australia.

*dolabratus* Linnaeus.

*hanleyanus* Reeve.

*hybridus* Linnaeus, Mediterranean.

*impervius* Menke, West coast Australia; Cape of Good Hope.

*indecorus* Philippi.

*kraussi* Philippi.

*labio* Linnaeus, Asia; Africa.

*laevissima* Martens, South Africa.

*ludwigi* Krauss, Cape of Good Hope.

*nigropunctatus* Reeve, Natal.

*obscurus* Wood.

*ornatus* Lamarck.

*perversus* Linnaeus, Mediterranean.

*puniceus* Philippi, New Zealand.

*roseus* Gmelin, Cape of Good Hope.

*scaber* Linnaeus.

*tamsii* Dunker, Cape of Good Hope; Guinea

*textilis* Reeve, Cape of Good Hope.

*troschelii* Philippi, South Africa.

*variegatus* Anton.

*vermiculata* Fischer.

*virgatus* Gmelin, India.

*zeyheri* Krauss, Cape of Good Hope.

*Trophon carduus* Broderip, Pascomayo, Peru.

*Turbinella incarnata* Reeve, Philippine Islands.

*nassatula* Lamarck.

*Turbo chrysostomus* Linnaeus, Asia.

*clathrus* Linnaeus, Europe; America.

*henicus* Watson, Matuku; Fiji Islands.

*intercostalis* Menke, Indian Ocean.

*lactea* Linnaeus, Mediterranean.

*minutus* Sowerby, South Africa

*pillula* Dunker, Japan.

*ponsonbyi* Sowerby, Durban.

*sanguineus* Linnaeus, Algeria.

*splendidulus* Sowerby.

*tricarinulatus* Euthyme, Saint Elizabeth and Cape of Good Hope.



- Turbonilla argentea* Sowerby, Port Elizabeth.  
*bifasciata* A. Adams, Australia; Japan.  
*candida* A. Adams, Japan.  
*disculus* Velain, St. Paul Island, Indian Ocean.  
*fusca* A. Adams, Port Lincoln.  
*hofmani* Angas, Australia?  
*rufa* Philippi, British?  
*scalaris* Philippi, British?  
*similans* Smith, South Africa.
- Turritella bacillum* Kiener, seas of India and China.  
*declivis* Adams and Reeve, China Sea.  
*excavata* Sowerby, Agulhas Bank.  
*natalensis* Smith, Bluff, Durban; Isezela.
- Typhis arcuatus* Hinds, Cape of Good Hope.
- Umbrella indica* Lamarck, Indian Ocean; Isle of France.
- Urosalpinx* ? *contracta* Reeve, Samar.
- Vanikoro deshayesiana* Recluz, Philippine Islands.  
*gueriniana* Recluz, Philippine Islands.  
*ligata* Récluz, Luzon.
- Venerupis lajonkairi* Payer., Corsica.  
*rugosa* Reeve, Swan River, South Africa.
- Venus abbreviata* Krauss, Natal Bay.  
*africana* Mühlfeld., Cape of Good Hope.  
*corrugatus* Gmelin, Mediterranean.  
*declivis* Sowerby, Eastern Seas.  
*geographica* Gmelin, Mediterranean.  
*intersculpta* Sowerby, Algoa Bay.  
*latilirata* Sowerby, Durban.  
*layardi* Reeve, Ceylon.  
*listeri* Gray, East Indies.  
*malonei* Vanatta, South Africa.  
*obsoleta* Chemnitz, Mediterranean.  
*paupercula* Chemnitz, Coromandel Coast.  
*pectinata* Linnaeus, India.  
*sulcaria* Lamarck, Moluccas; Indo-Pacific?
- Vermetus conicus* Dillwyn, West Indies.  
*nebulosus* Dillwyn, West Indies.  
*tricuspe* Mörch, Australia.
- Voluta abyssicola* Adams and Reeve, Cape of Good Hope.  
*armata* Lamarck, Cape of Good Hope.  
*festiva* Lamarck, Central America.  
*flammeus* Gmelin.  
*ispidula* Linnaeus.  
*micans* Dillwyn, Moluccas; Philippine Islands; Isle of France.  
*mitraeformis* Lamarck, Java; New Holland.  
*ponsonbyi* Smith, Natal.  
*queketti* Smith, Natal.  
*scapha* Gmelin, Cape of Good Hope.  
*turrata* Gmelin.  
*ziczac* Mühlfeld, South Seas.
- Volutilithes güichristi* Sowerby, Cape Natal.
- Volutomitra cinnamomea* A. Adams, Natal.
- Ziziphinus euglyptus* A. Adams, Van Diemens Land.  
*multiliratum* Sowerby.
- Zofra mitriformis* A. Adams, Mino-Sima.



## EXPLANATION OF PLATES.

### PLATE 1.

- FIG. 1. *Marginella puella* Gould, type, length 10 mm., p. 38.  
2. *Marginella alfredensis*, new species, type, length 2.5 mm., p. 41.  
3. *Marginella turtoni*, new species, type, length 8.5 mm., p. 39.  
4. *Ringicula turtoni*, new species, type, length 4.7 mm., p. 77.  
5. *Haminea alfredensis*, new species, type, length 12.4 mm, p. 6.  
6. *Marginella cleo*, new species, type, length 6.8 mm., p. 39.  
7. *Marginella neglecta* Sowerby, length 4.1 mm., p. 39.  
8. *Cylichna africana*, new species, type, length 3.4 mm., p. 5.  
9. *Acteocina smithi*, new species, cotype, length 4.5 mm., p. 4.  
10. *Conus lavendulus*, new species, type, length 36.1 mm., p. 12.  
11. *Marginella eucosmia*, new species, type, length 12.5 mm., p. 37.  
12. *Conus alfredensis*, new species, cotype, length 45 mm., p. 13.

### PLATE 2.

- FIG. 1. *Mangilia dina*, new species, type, length 6 mm., p. 23.  
2. *Clionella turtoni*, new species, type, length 26.5 mm., p. 17.  
3. *Clavatula haliplex*, new species, type, length 29.5 mm., p. 19.  
4. *Drillia lara*, new species, type, length 13.6 mm., p. 22.  
5. *Clavatula halistrepta*, new species, type, length 33.5 mm., p. 19.  
6. *Mangilia humerosa*, new species, type, length 6.6 mm., p. 30.  
7. *Mangilia eucosmia*, new species, type, length 12.4 mm., p. 28.  
8. *Clionella nereia*, new species, type, length 14 mm., p. 16.  
9. *Drillia halidoma*, new species, type, length 18.6 mm., p. 23.  
10. *Mangilia amplexa* Gould, type, length 8 mm., p. 30.

### PLATE 3.

- FIG. 1. *Cythara ima* new species, type, length 8.1 mm., p. 31.  
2. *Bullia alfredensis*, new species, type, length 27 mm., p. 54.  
3. *Donovania stimpsoni*, new species, type, length 5.4 mm., p. 33.  
4. *Mangilia nympha*, new species, type, length 3.9 mm., p. 29.  
5. *Cylichna tubulosa* Gould, type, length 8 mm., p. 5.  
6. *Euthria turtoni*, new species, type, length 25 mm., p. 50.  
7. *Cominella alfredensis*, new species, type, length 29.2 mm., p. 48.  
8. *Mangilia arata*, new species, type, length 6.7 mm., p. 27.

### PLATE 4.

- FIG. 1. *Clionella elizabethae*, new species, type, length 13 mm., p. 16.  
2. *Cancellaria dalli*, new species, type, length 18 mm., p. 33.  
3. *Fasciolaria alfredensis*, new species, type, length 133 mm., p. 46.  
3a. *Fasciolaria alfredensis*, new species, (detail of sculpture of the spire), p. 46.  
3b. *Fasciolaria alfredensis*, new species, (detail of sculpture of base), p. 46.  
4. *Nyctilochus alfredensis*, new species, type, length 60.5 mm., p. 94.  
5. *Colubraria alfredensis*, new species, type, length 33.5 mm., p. 50.  
6. *Cominella porcata multilirata*, new subspecies, type, length 47.5 mm., p. 47.

## PLATE 5.

- FIG. 1. *Rissoina calia*, new species, type, length 6.7 mm., p. 130.  
2. *Alvania ima*, new species, type, length 2.3 mm., p. 129.  
3. *Alvania nemo*, new species, type, length 1.8 mm., p. 127.  
4. *Triphoris capensis*, new species, type, length 5.1 mm., p. 105.  
5. *Alvania farquhari* Smith, p. 128.  
6. *Seila alfredensis*, new species, cotype, length 10 mm., p. 113.  
7. *Alabina alfredensis*, new species, type, length 3.2 mm., p. 121.  
8. *Turritella stimpsoni*, new species, type, length 20.5 mm., p. 118.  
9. *Cerithiopsis (Cerithiopsis) alfredensis*, new species, type, length 5 mm., p. 109.  
10. *Rissoina (Phosinella) pura* Gould, type, length 5.8 mm., p. 131.  
11. *Triphoris africana*, new species, type, length 5. mm., p. 103.

## PLATE 6.

- FIG. 1. *Diala africana*, new species, type, length 4.8 mm., p. 122.  
2. *Diala almo*, new species, type, length 2mm., p. 123.  
3. *Microsetia helga*, new species, type, length 2.7 mm., p. 133.  
4. *Microsetia gisna*, new species, type, length 2 mm., p. 132.  
5. *Amphithalamus turtoni*, new species, type, length 1 mm., p. 126.  
6. *Sabanaea thalia*, new species, type, length 1.7 mm., p. 126.  
7. *Sabanaea pyrrha*, new species, type, length 1.3 mm., p. 125.  
8. *Microsetia halia*, new species, type, length 2.1 mm., p. 132.  
9. *Assimineia capensis*, new species, type, length 6 mm., p. 135.  
10. *Diala capensis*, new species, type, length 2.5 mm., p. 123.

## PLATE 7.

- FIG. 1. *Mangilia nisga*, new species, type, length 3.1 mm., p. 25.  
2. *Mangilia helga*, new species, type, length 3 mm., p. 26.  
3. *Mangilia gisna*, new species, type, length 3.1 mm., p. 24.  
4. *Drillia signa*, new species, type, length 14 mm., p. 21.  
5. *Mangilia benjamini*, new species, type, length 15.3 mm., p. 26.  
6. *Mangilia amplexa* Gould, type, length 8 mm., p. 30.  
7. *Mangilia herilda*, new species, type, length 7.4 mm., p. 28.  
8. *Clionella sybaritica*, new species, type, length 20.5 mm., p. 15.

## PLATE 8.

- FIG. 1. *Eugyrina gemnifera lepta*, new subspecies (front), type, length 84.2 mm., p. 93.  
2. *Clavatula helena*, new species, type, length 28 mm., p. 20.  
3. *Daphnella alfredensis*, new species, type, length 9.6 mm., p. 32.  
4. *Eugyrina gemnifera lepta*, new subspecies (back), type, length 84.2 mm., p. 93.

## PLATE 9.

- FIG. 1. *Eugyrina gemnifera* Euthyme, length 91 mm. (front), p. 93.  
2. *Epitonium africanum*, new species, type, length 31 mm., p. 62.  
3. *Turbonilla (Pyrgolampros) anaea*, new species, type, length 5 mm., p. 77.  
4. *Eugyrina gemnifera* Euthyme, length 91 mm. (back), p. 93.

## PLATE 10.

- FIG. 1. *Amphiperas smithi*, new species, type, length 19.5 mm. (front), p. 96.  
2. *Phasianella africana*, new species, type, length 3.5 mm., p. 145.  
3. *Amphiperas smithi*, new species, type, length 19.5 mm. (back), p. 96.  
4. *Marginella alfredensis*, new species, type, length 2.5 mm., p. 41.

- FIG. 5. *Barleeia smithi*, new species, type, length 1.5 mm., p. 134.  
 6. *Triphoris ima*, new species, type, length 9.5 mm., p. 108.  
 7. *Triphoris smithi*, new species, adult cotype, length 13 mm., p. 100.  
 8. *Triphoris smithi*, new species (tip), cotype, p. 100.

## PLATE 11.

- FIG. 1. *Triphoris elsa*, new species, type, length 9.5 mm., p. 101.  
 2. *Triphoris helena*, new species, young cotype, length 5.1 mm., p. 99.  
 3. *Triphoris milda*, new species, type, length 9.6 mm., p. 102.  
 4. *Triphoris oreada*, new species, type, length 8.8 mm., p. 104.  
 5. *Triphoris helena*, new species, adult cotype, length 8.6 mm., p. 99.  
 6. *Triphoris atea*, new species, type, length 12 mm., p. 98.  
 7. *Triphoris sabita*, new species, type, length 3 mm., p. 106.  
 8. *Triphoris nina*, new species, type, length 5 mm., p. 108.

## PLATE 12.

- FIG. 1. *Alabina africana*, new species, type, length 2 mm., p. 121.  
 2. *Cerithiopsis (Cerithiopsis) nina*, new species, type, length 1.9 mm., p. 111.  
 3. *Cerithiopsis (Cerithiopsis) nisaba*, new species, type, length 3.4 mm., p. 112.  
 4. *Eumeta bia*, new species, type, length 2.7 mm., p. 116.  
 5. *Triphoris madria*, new species, type, length 6.5 mm., p. 105.  
 6. *Cerithiopsis ernae*, new species, type, length 4.5 mm., p. 110.  
 7. *Seila smithi*, new species, type, length 3.2 mm., p. 115.  
 8. *Cerithiopsis (Cerithiopsis) saba*, new species, type, length 3.8 mm., p. 112.

## PLATE 13.

- FIG. 1. *Natica saldontiana*, new species, type, length 14.2 mm. (top), p. 140.  
 2. *Natica saldontiana*, new species (profile), p. 140.  
 3. *Natica saldontiana*, new species (bottom), p. 140.  
 4. *Natica alfredensis*, new species, type, length 17 mm. (top), p. 138.  
 5. *Natica stimpsoni*, new species, type, length 38.5 mm. (top), p. 137.  
 6. *Natica nemo*, new species, type, length 14.2 mm. (top), p. 139.  
 7. *Natica alfredensis*, new species (profile), p. 138.  
 8. *Natica stimpsoni*, new species (profile), p. 137.  
 9. *Natica nemo*, new species (profile), p. 139.  
 10. *Natica alfredensis*, new species (bottom), p. 138.  
 11. *Natica stimpsoni*, new species (bottom), p. 137.  
 12. *Natica nemo*, new species (bottom), p. 139.  
 13. *Natica africana*, new species, type, length 11.3 mm. (top), p. 138.  
 14. *Natica africana*, new species (profile), p. 138.  
 15. *Natica africana*, new species (bottom), p. 138.

## PLATE 14.

- FIG. 1. *Turbonilla (Pyrgiscus) helena*, new species, type, length 3.9 mm., p. 77.  
 2. *Pyramidella (Orinella) africana*, new species, type, length 6.1 mm., p. 71.  
 3. *Turbonilla (Pyrgiscus) maia*, new species, type, length 7.1 mm., p. 80.  
 4. *Pyramidella (Orinella) africana*, new species (tip), p. 71.  
 5. *Pyramidella (Orinella) alfredensis*, new species (tip), p. 71.  
 6. *Pyramidella (Syrnola) tarpeia*, new species, type, length 3.7 mm., p. 74.  
 7. *Pyramidella (Orinella) alfredensis*, new species, type, length 9 mm., p. 71.  
 8. *Pyramidella (Syrnola) pyrrha*, new species, type, length 5.8 mm., p. 73.  
 9. *Pyramidella (Syrnola) aganea*, new name, type, length 7.5 mm., p. 73.



## PLATE 15.

- FIG. 1. *Turbonilla* (*Pyrgiscus*) *atossa*, new species, type, length 4.4 mm., p. 78.  
 2. *Turbonilla* (*Pyrgiscus*) *tefunta*, new species, type, length 4.6 mm., p. 80.  
 3. *Pyramidella* (*Orinella*) *ima*, new species, type, length 7.5 mm., p. 72.  
 4. *Pyramidella* (*Actaeopyramis*) *norna*, new species, type, length 5.9 mm., p. 72.  
 5. *Turbonilla* (*Pseliogyra*) *adaba*, new species, type, length 5 mm., p. 75.  
 6. *Pyramidella* (*Syrnola*) *hera*, new species, type, length 4 mm., p. 74.

## PLATE 16.

- FIG. 1. *Odostomia* (*Menestho*) *ficara*, new species, type, length 3.3 mm., p. 88.  
 2. *Turbonilla* (*Ptycheulimella*) *erna*, new species, type, length 3 mm., p. 75.  
 3. *Odostomia* (*Evalea*) *acrifia*, new species, type, length 3.4 mm., p. 91.  
 4. *Turbonilla* (*Pyrgiscus*) *apsa*, new species, type, length 4.9 mm., p. 81.  
 5. *Turbonilla* (*Mormula*) *cifara*, new species, type, length 15 mm., p. 84.  
 6. *Turbonilla* (*Pyrgiscus*) *zenobia*, new species, type, length 4 mm., p. 79.

## PLATE 17.

- FIG. 1. *Turbonilla* (*Cingulina*) *trachealis* Gould, type, length 5.7 mm., p. 82.  
 2. *Turbonilla* (*Cingulina*) *callista*, new species, type, length 4.2 mm., p. 83.  
 3. *Turbonilla* (*Cingulina*) *aglaia*, new species, type, length 5.3 mm., p. 83.  
 4. *Epitonium aglaia*, new species, type, length 12 mm., p. 63.  
 5. *Acrilla thalia*, new species, type, length 33 mm., (tip) p. 64.  
 6. *Seila africana*, new species, type, length 7.6 mm., p. 114.  
 7. *Turbonilla* (*Strioturbonilla*) *secura*, new name, type, length 11.1 mm., p. 76.  
 8. *Acrilla thalia*, new species, type, length 33 mm., p. 64.

## PLATE 18.

- FIG. 1. *Odostomia* (*Odostomia*) *icafra*, new species, type, length 2.4 mm., p. 92.  
 2. *Odostomia* (*Odostomia*) *irafca*, new species, type, length 1.5 mm., p. 91.  
 3. *Odostomia* (*Menestho*) *rifaca*, new species, type, length 1.9 mm., p. 88.  
 4. *Odostomia* (*Odostomella*) *farica*, new species, type, length 1.5 mm., p. 85.  
 5. *Odostomia* (*Menestho*) *carifa*, new species, type, length 1.5 mm., p. 87.  
 6. *Niso alfredensis*, new species, type, length 11 mm., p. 70.  
 7. *Odostomia* (*Pyrgulina*) *arfica*, new species, type, length 4 mm., p. 86.  
 8. *Odostomia* (*Evalea*) *cifara*, new species, type, length 3.8 mm., p. 90.

## PLATE 19.

- FIG. 1. *Odostomia* (*Evalea*) *gea*, new species, type, length 2.6 mm., p. 90.  
 2. *Melanella iota*, new species, type, length 1.5 mm., p. 67.  
 3. *Odostomia* (*Egolina*) *turtoni*, new species, type, length 2 mm., p. 86.  
 4. *Turbonilla* (*Pyrgiscus*) *tritonia*, new species, type, length 2 mm., p. 79.  
 5. *Melanella alfredensis*, new species, type, length 4 mm., p. 66.  
 6. *Subeulima magnifica*, new species, type, length 5 mm., p. 70.  
 7. *Odostomia* (*Evalea*) *aethra*, new species, type, length 3 mm., p. 89.  
 8. *Odostomia* (*Miralda*) *agana*, new species, type, length 2.4 mm., p. 87.  
 9. *Melanella thaha*, new species, type, length 3.2 mm., p. 68.

## PLATE 20.

- FIG. 1. *Melanella farica*, new species, type, length 3 mm., p. 67.  
 2. *Rissoina eucosmia*, new species, type, length 2.8 mm., p. 131.  
 3. *Melanella icafra*, new species, type, length 2.2 mm., p. 66.  
 4. *Turbonilla* (*Careliopsis*) *carifa*, new species, type, length 2.1 mm., p. 84.

- FIG. 5. *Melanella cifara*, new species, type, length 2.1 mm., p. 69.  
 6. *Melanella irafca*, new species, type, length 5.5 mm., p. 69.  
 7. *Melanella carifa*, new species, type, length 4.1 mm., p. 65.  
 8. *Melanella acrifia*, new species, type, length 9.2 mm., p. 68.

## PLATE 21.

- FIG. 1. *Marginella almo*, new species, type, length 5.4 mm., p. 41.  
 2. *Marginella cosmia*, new species, type, length 11.7 mm., p. 37.  
 3. *Marginella lepta*, new species, type, length 5.1 mm., p. 40.  
 4. *Mitra ima*, new species, type, length 9 mm., p. 44.  
 5. *Cythna africana*, new species, type, length 0.7 mm., p. 120.  
 6. *Amphithalamus africanus*, new species, type, length 1.2 mm., p. 127.  
 7. *Alvania almo*, new species, type, length 2.1 mm., p. 128.  
 8. *Alvania alfredensis*, new species, type, length 1.5 mm., p. 128.  
 9. *Microsetia irma*, new species, type, length 1.6 mm., p. 133.

## PLATE 22

- FIG. 1. *Leptothyra africana*, new species, type, greater diameter 7.2 mm. (top), p. 147.  
 2. *Leptothyra africana*, new species (profile), p. 147.  
 3. *Leptothyra africana*, new species (bottom), p. 147.  
 4. *Leptothyra spuria* Gould (top), cotype, greater diameter 6.5 mm., p. 146.  
 5. *Leptothyra spuria* Gould (profile), p. 146.  
 6. *Leptothyra spuria* Gould (bottom), p. 146.

## PLATE 23.

- FIG. 1. *Gibbula loculosa* Gould (top), cotype, greater diameter 8.5 mm., p. 153.  
 2. *Gibbula loculosa* Gould (bottom), p. 153.  
 3. *Gibbula loculosa* Gould (profile), p. 153.  
 4. *Leptothyra quantilla* Gould, type, greater diameter 2.8 mm. (top), p. 148.  
 5. *Leptothyra quantilla* Gould (profile), p. 148.  
 6. *Leptothyra quantilla* Gould (bottom), p. 148.  
 7. *Leptothyra carminea*, new species, type, greater diameter 3.3 mm. (top), p. 148.  
 8. *Leptothyra carminea*, new species (profile), p. 148.  
 9. *Leptothyra carminea*, new species (bottom), p. 148.  
 10. *Clanculus alfredensis*, new species, type, greater diameter 8.7 mm. (profile), p. 150.  
 11. *Clanculus alfredensis*, new species (top), p. 150.  
 12. *Clanculus alfredensis*, new species (bottom), p. 150.

## PLATE 24.

- FIG. 1. *Heliacus africanus*, new species, type, greatest diameter 9.6 mm. (top), p. 123.  
 2. *Calliostoma africana*, new species, type, altitude 12.8 mm. (profile), p. 162.  
 3. *Heliacus africanus*, new species (bottom), p. 123.  
 4. *Calliostoma africana*, new species (top), p. 162.  
 5. *Heliacus africanus*, new species (profile), p. 123.  
 6. *Calliostoma africana*, new species (bottom), p. 162.  
 7. *Haliotis alfredensis*, new species, type, length 5.5 mm. (exterior), p. 175.  
 8. *Haliotis alfredensis*, new species (interior), p. 175.

## PLATE 25.

- FIG. 1. *Calliostoma eucosmia*, new species, type, greater diameter 20 mm. (top), p. 161.  
 2. *Calliostoma eucosmia*, new species, (bottom), p. 161.  
 3. *Calliostoma eucosmia*, new species (profile), p. 161.

- FIG. 4. *Gibbula articulata* Gould, type, greater diameter 7 mm. (top), p. 155.  
5. *Gibbula articulata* Gould (profile), p. 155.  
6. *Gibbula articulata* Gould (bottom), p. 155.  
7. *Melanella asser*, new species, type, length 1.7 mm., p. 68.

## PLATE 26.

- FIG. 1. *Gibbula hera*, new species, type, greater diameter 8 mm. (top), p. 157.  
2. *Gibbula hera*, new species (profile), p. 157.  
3. *Gibbula hera*, new species, (bottom), p. 157.  
4. *Gibbula fulgens* Gould, type, altitude 8 mm. (top), p. 154.  
5. *Gibbula fulgens* Gould (profile), p. 154.  
6. *Gibbula fulgens* Gould (bottom), p. 154.

## PLATE 27.

- FIG. 1. *Gibbula aglaia*, new species, type, greater diameter 6.4 mm. (top), p. 158.  
2. *Gibbula aglaia*, new species, (profile), p. 158.  
3. *Gibbula aglaia*, new species (bottom), p. 158.  
4. *Gibbula fucata* Gould, cotype, greater diameter 7.3 mm. (top), p. 155.  
5. *Gibbula fucata* Gould (profile), p. 155.  
6. *Gibbula fucata* Gould (bottom), p. 155.

## PLATE 28.

- FIG. 1. *Gibbula gaudiosa* Gould, cotype, greater diameter 5.7 mm. (top), p. 156.  
2. *Gibbula gaudiosa* Gould (bottom), p. 156.  
3. *Gibbula gaudiosa* Gould (profile), p. 156.  
4. *Cynisca africana*, new species, type, greater diameter 2.6 mm. (top), p. 165.  
5. *Cynisca africana*, new species (profile), p. 165.  
6. *Cynisca africana*, new species (bottom), p. 165.  
7. *Teinostoma alfredensis*, type, greater diameter 2 mm. (top), p. 165.  
8. *Teinostoma alfredensis* (profile), p. 165.  
9. *Teinostoma alfredensis* (bottom), p. 165.  
10. *Gibbula pintado* Gould, type, greater diameter 5.6 mm. (profile), p. 160.  
11. *Gibbula pintado* Gould (top), p. 160.  
12. *Gibbula pintado* Gould (bottom), p. 160.

## PLATE 29.

- FIG. 1. *Cyclostremella africana*, new species, type, greater diameter 2.1 mm. (top), p. 170.  
2. *Cyclostremella africana*, new species (profile), p. 170.  
3. *Cyclostremella africana*, new species (bottom), p. 170.  
4. *Ilaira fulgens* Gould, type, greater diameter 5 mm. (top), p. 166.  
5. *Ilaira fulgens* Gould (profile), p. 166.  
6. *Ilaira fulgens* Gould (bottom), p. 166.  
7. *Gibbula medusa*, new species, type, greater diameter 5 mm. (profile), p. 159.  
8. *Gibbula medusa*, new species (top), p. 159.  
9. *Gibbula medusa*, new species (bottom), p. 159.  
10. *Cynisca alfredensis*, new species, type, greater diameter 8 mm. (profile), p. 164.  
11. *Cynisca alfredensis*, new species, type (top), p. 164.  
12. *Cynisca alfredensis*, new species, type (bottom), p. 164.

## PLATE 30.

- FIG. 1. *Gibbula thalia*, new species, type, greater diameter 5.5 mm. (top), p. 157.  
2. *Gibbula thalia*, new species (bottom), p. 157.  
3. *Gibbula thalia*, new species (profile), p. 157.

- FIG. 4. *Puncturella africana*, new species, type, long diameter 1.9 mm. (top), p. 177.  
 5. *Puncturella africana*, new species (side), p. 177.  
 6. Nepionic shell (back), p. 174.  
 7. Nepionic shell (front), p. 174.  
 8. *Gibbula cicer* Menke (profile), p. 156.  
 9. *Gibbula cicer* Menke (top), p. 156.  
 10. *Gibbula cicer* Menke (bottom), p. 156.

## PLATE 31.

- FIG. 1. *Discopsis alfredensis*, new species, type, greater diameter 1.8 mm. (top), p. 172.  
 2. *Discopsis alfredensis*, new species (bottom), p. 172.  
 3. *Discopsis alfredensis*, new species (profile), p. 172.  
 4. *Fenella almo*, new species, type, length 7.1 mm., p. 134.  
 5. *Nodulus africanus*, new species, type, length 1.4 mm., p. 125.  
 6. *Cynisca gloriosa*, new species, type, greater diameter 7 mm. (profile), p. 163.  
 7. *Cynisca gloriosa*, new species (top), p. 163.  
 8. *Cynisca gloriosa*, new species (bottom), p. 163.

## PLATE 32.

- FIG. 1. *Leptothyra alfredensis*, new species, type, greater diameter 4.8 mm. (top), p. 149.  
 2. *Leptothyra alfredensis*, new species (bottom), p. 149.  
 3. *Leptothyra alfredensis*, new species (profile), p. 149.  
 4. *Gibbula rifaca*, new species, type, greater diameter 5 mm. (top), p. 160.  
 5. *Gibbula rifaca*, new species (profile), p. 160.  
 6. *Gibbula rifaca*, new species (bottom), p. 160.  
 7. *Cyclostremella farica*, new species, type, greater diameter 1.5 mm. (profile) p. 169.  
 8. *Cyclostremella farica*, new species (top), p. 169.  
 9. *Cyclostremella farica*, new species (bottom), p. 169.

## PLATE 33.

- FIG. 1. *Discopsis turtoni*, new species, type, greatest diameter 2.5 mm. (top), p. 173.  
 2. *Discopsis turtoni*, new species (bottom), p. 173.  
 3. *Discopsis turtoni*, new species (profile), p. 173.  
 4. *Ringicula africana*, new species, type, length 5.2 mm., p. 7.  
 5. *Discopsis africana*, new species, type, greatest diameter 2.3 mm. (profile), p. 172.  
 6. *Discopsis africana*, new species (top), p. 172.  
 7. *Discopsis africana*, new species (bottom), p. 172.

## PLATE 34.

- FIG. 1. *Vitrinella ficara*, new species, type, greater diameter 3 mm. (top), p. 167.  
 2. *Vitrinella ficara*, new species (bottom), p. 167.  
 3. *Vitrinella ficara*, new species (profile), p. 167.  
 4. *Styliola africana*, new species, type, length, 4 mm., p. 3.  
 5. *Vitrinella facira*, new species, type, greater diameter 2 mm. (profile), p. 168.  
 6. *Vitrinella facira*, new species (top), p. 168.  
 7. *Vitrinella facira*, new species (bottom), p. 168.

## PLATE 35.

- FIG. 1. *Caporbis africana*, new species, type, greater diameter 1.8 mm. (bottom), p. 170.  
 2. *Caporbis africana*, new species (top), p. 170.  
 3. *Caporbis africana*, new species (profile), p. 170.  
 4. *Bullia almo*, new species, type, length 22 mm., p. 54.  
 5. *Bullia aepynota*, new species, type, length 19 mm., p. 53.

- FIG. 6. *Cyclostrema alfredensis*, new species, type, greater diameter 1.7 mm. (profile), p. 169.  
7. *Cyclostrema alfredensis*, new species (top), p. 169.  
8. *Cyclostrema alfredensis*, new species (bottom), p. 169.

## PLATE 36.

- FIG. 1. *Pondorbis alfredensis*, new species, type, greater diameter .8 mm. (top), p. 171.  
2. *Pondorbis alfredensis*, new species (profile), p. 171.  
3. *Pondorbis alfredensis*, new species (bottom), p. 171.  
4. *Leptogyra africana*, new species, type, greater diameter 1 mm. (top), p. 173.  
5. *Leptogyra africana*, new species (bottom), p. 173.  
6. *Leptogyra africana*, new species (profile), p. 173.  
7. *Vitrinella (Docomphala) arifica*, new species, type, greater diameter 1.1 mm. (top), p. 168.  
8. *Vitrinella (Docomphala) arifica*, new species (bottom), p. 168.  
9. *Vitrinella (Docomphala) arifica*, new species (profile), p. 168.  
10. *Graphis africana*, new species, type, length 2.3 mm., p. 64.  
11. *Vanikoro africana*, new species, type, altitude 3 mm., p. 140.

## PLATE 37.

- FIG. 1. *Vitrinella rifaca*, new species, type, greater diameter 1.8 mm. (top), p. 167.  
2. *Vitrinella rifaca*, new species (bottom), p. 167.  
3. *Vitrinella rifaca*, new species (profile), p. 167.  
4. *Columbella (Anachis) io*, new species, type, length 6.5 mm., p. 54.  
5. *Columbella (Seminella) alfredensis*, new species, type, length 6.1 mm., p. 56.  
6. *Murex alfredensis*, new species, type, length 6 mm., p. 59.  
7. *Vitrinella cifara*, new species, type, greater diameter 1.4 mm. (profile), p. 167.  
8. *Vitrinella cifara*, new species (top), p. 167.  
9. *Vitrinella cifara*, new species (bottom), p. 167.

## PLATE 38.

- FIG. 1. *Barbatia cafria*, new species, type, length 14.2 mm., p. 183.  
2. *Cylindrobulla turtoni*, new species, type, length 8 mm., p. 8.  
3. *Bullia lara*, new species, type, length 38 mm., p. 53.  
4. *Lima africana*, new species, type, length 13.5 mm., p. 187.  
5. *Barbatia cafria*, new species, p. 183.  
6. *Littorina africana tryphena*, new subspecies, type, length 7 mm., p. 120.

## PLATE 39.

- FIG. 1. *Dinoplax gigas alfredensis*, new subspecies, type, length 62 mm., p. 179.  
2. *Dinoplax gigas alfredensis*, new subspecies (top), p. 179.  
3. *Erycina rifaca*, new species, type, length 1.2 mm., p. 197.  
4. *Hochstetteria paramoea*, new species, type, altitude 2.2 mm., p. 184.  
5. *Rochefortia io*, new species, type, length 1.1 mm., p. 201.  
6. *Hochstetteria alfredensis*, new species, type, altitude 3.6 mm. (exterior), p. 184.  
7. *Hochstetteria alfredensis*, new species (interior), p. 184.

## PLATE 40.

- FIG. 1. *Solen alfredensis*, new species, type, length 96.5 mm. (exterior), p. 208.  
2. *Solen alfredensis*, new species (interior), p. 208.  
3. *Atrina alfredensis*, new species, type, length 73 mm., p. 183.



## PLATE 41.

- FIG. 1. *Crenella alfredensis*, new species, type, altitude 3.2 mm., p. 189.  
 2. *Modiolaria africana*, new species, type, length 3.5 mm., p. 190.  
 3. *Rocheportia elsa*, new species, type, length 1.8 mm., p. 200.  
 4. *Modiolaria ima*, new species, type, length 7 mm., p. 190.  
 5. *Modiolaria ima*, new species, p. 190.  
 6. *Bornia farica*, new species, cotype, length 3 mm., p. 198.  
 7. *Bornia arfica*, new species, type, length 2.8 mm., p. 199.

## PLATE 42.

- FIG. 1. *Bornia (Pythina) africana*, new species, type, length 13.8 mm., p. 199.  
 2. *Bornia (Pythina) africana*, new species, p. 199.  
 3. *Rocheportia helena*, new species, type, length 1.5 mm., p. 201.  
 4. *Rocheportia helena*, new species, p. 201.  
 5. *Modiolaria cuneata* Gould cotype, length, 11.8 mm. (interior), p. 189.  
 6. *Modiolaria cuneata* Gould (exterior), p. 189.  
 7. *Erycina ima*, new species, type, length 2.2 mm. (interior), p. 197.  
 8. *Erycina ima*, new species (exterior), p. 197.  
 9. *Lasea turtoni*, new species, type, length 4.1 mm. (interior), p. 201.  
 10. *Lasea turtoni*, new species (exterior), p. 201.

## PLATE 43.

- FIG. 1. *Ungulina alfredensis*, new species, cotype, length 18 mm. (exterior), p. 196.  
 2. *Ungulina alfredensis*, new species (interior), p. 196.  
 3. *Erycina firmata* Gould, type, length 4.8 mm. (exterior), p. 196.  
 4. *Erycina firmata* Gould (interior), p. 196.  
 5. *Eastonia africana*, new species, type, length 36 mm. (exterior), p. 209.  
 6. *Eastonia africana*, new species (interior), p. 209.  
 7. *Erycina alfredensis*, new species, type, length 4.9 mm. (exterior), p. 197.  
 8. *Erycina alfredensis*, new species, type, (interior), p. 197.

## PLATE 44.

- FIG. 1. *Pholas alfredensis*, new species, type, length 41 mm. (exterior), p. 210.  
 2. *Pholas alfredensis*, new species (interior), p. 210.  
 3. *Anomalocardia alfredensis*, new species, type, length 31 mm. (exterior), p. 203.  
 4. *Anomalocardia alfredensis*, new species (interior), p. 203.  
 5. *Dentalium strigatum* Gould, cotype, length, 15.1 mm., p. 180.  
 6. *Mactra alfredensis*, new species, type, length 41 mm. (exterior), p. 209.  
 7. *Mactra alfredensis*, new species (interior), p. 209.

## PLATE 45.

- FIG. 1. *Rocheportia convexa* Gould, cotype, length 4.2 mm., p. 199.  
 2. *Rocheportia convexa* Gould, p. 199.  
 3. *Scintilla turtoni*, new species, type, length 8.5 mm., p. 196.  
 4. *Digitaria africana*, new species, type, length 3.7 mm., p. 194.  
 5. *Rocheportia enora*, new species, type, length 3.8 mm., p. 200.  
 6. *Erycina carifa*, new species, type, length 3.5 mm., p. 197.  
 7. *Abra africana*, new species, type, length 5 mm., p. 206.  
 8. *Theora alfredensis*, new species, type, length 9.2 mm., p. 206.

## PLATE 46.

- FIG. 1. *Philobrya africana*, new species, type, length 5 mm. (exterior), p. 185.  
2. *Philobrya africana*, new species (interior), p. 185.  
3. *Circe alfredensis*, new species, type, length 16 mm. (exterior), p. 203.  
4. *Circe alfredensis*, new species (interior), p. 203.  
5. *Erycina subradiata* Carpenter, type, length 3.6 mm. (exterior), p. 197.  
6. *Erycina subradiata* Carpenter (interior), p. 197.  
7. *Tellina albinella alfredensis*, new subspecies, type, length 46.8 mm., p. 205.  
8. *Tellina albinella alfredensis*, new subspecies, p. 205.  
9. *Barbatia alfredensis*, new species, type, length 34 mm. (exterior), p. 182.  
10. *Barbatia alfredensis*, new species (interior), p. 182.

## PLATE 47.

- FIG. 1. *Diplodonta almo*, new species, type, length 3.5 mm., p. 195.  
2. *Rochefortia helena*, new species, type, length 1.5 mm., p. 201.  
3. *Cuna concentrica*, new species, type, length 1.2 mm., p. 191.  
4. *Rochefortia convexa* Gould, young cotype, p. 199.  
5. *Diplodonta africana*, new species, type, length 2.2 mm., p. 195.  
6. *Rochefortia milda*, new species, type, length 2.5 mm., p. 200.

## PLATE 48.

- FIG. 1. *Condylocardia io*, new species, type, length 2.6 mm., p. 193.  
2. *Rochefortia farma*, new species, type, length 2.5 mm., p. 201.  
3. *Venericardia africana*, new species, type, altitude 3.1 mm., p. 192.  
4. *Carditopsis alfredensis*, new species, type, altitude 2 mm., p. 193.  
5. *Felaniella alfredensis*, new species, type, length 1.9 mm., p. 195.

## PLATE 49.

- FIG. 1. *Crenella alfredensis*, new species, p. 189.  
2. *Erycina subradiata* Carpenter, p. 197.  
3. *Theora alfredensis*, new species, p. 206.  
4. *Scintilla turtoni*, new species, p. 196.  
5. *Scintilla turtoni*, new species, p. 196.  
6. *Erycina firmata* Gould, p. 196.  
7. *Erycina firmata* Gould, p. 196.  
8. *Abra africana*, new species, p. 206.  
9. *Abra africana*, new species, p. 206.

## PLATE 50.

- FIG. 1. *Erycina alfredensis*, new species, p. 197.  
2. *Erycina alfredensis*, new species, p. 197.  
3. *Erycina ima*, new species, p. 197.  
4. *Erycina ima*, new species, p. 197.  
5. *Erycina carifa*, new species, p. 197.  
6. *Erycina carifa*, new species, p. 197.  
7. *Erycina rifaca*, new species, p. 198.  
8. *Erycina rifaca*, new species, p. 198.  
9. *Bornia fortidentata* Smith, p. 198.  
10. *Bornia fortidentata* Smith, p. 198.

## PLATE 51.

- FIG. 1. *Bornia farica*, new species, p. 198.  
 2. *Bornia farica*, new species, p. 198.  
 3. *Bornia* (*Pythina*) *africana*, new species, p. 199.  
 4. *Bornia arfica*, new species, p. 199.  
 5. *Bornia* (*Pythina*) *rotundata* Deshayes, p. 199.  
 6. *Bornia* (*Pythina*) *rotundata* Deshayes, p. 199.  
 7. *Rochefortia convexa* Gould, p. 199.  
 8. *Rochefortia convexa* Gould, p. 199.  
 9. *Rochefortia similis* Smith, p. 200.  
 10. *Rochefortia similis* Smith, p. 200.

## PLATE 52.

- FIG. 1. *Rochefortia natalensis* Smith, p. 200.  
 2. *Rochefortia natalensis* Smith, p. 200.  
 3. *Rochefortia enora*, new species, p. 200.  
 4. *Rochefortia enora*, new species, p. 200.  
 5. *Rochefortia elsa*, new species, p. 200.  
 6. *Rochefortia elsa*, new species, p. 200.  
 7. *Rochefortia helena*, new species, p. 201.  
 8. *Rochefortia helena*, new species, p. 201.  
 9. *Rochefortia milda*, new species, p. 200.  
 10. *Rochefortia milda*, new species, p. 200.  
 11. *Cuna concentrica*, new species, p. 191.  
 12. *Cuna concentrica*, new species, p. 191.

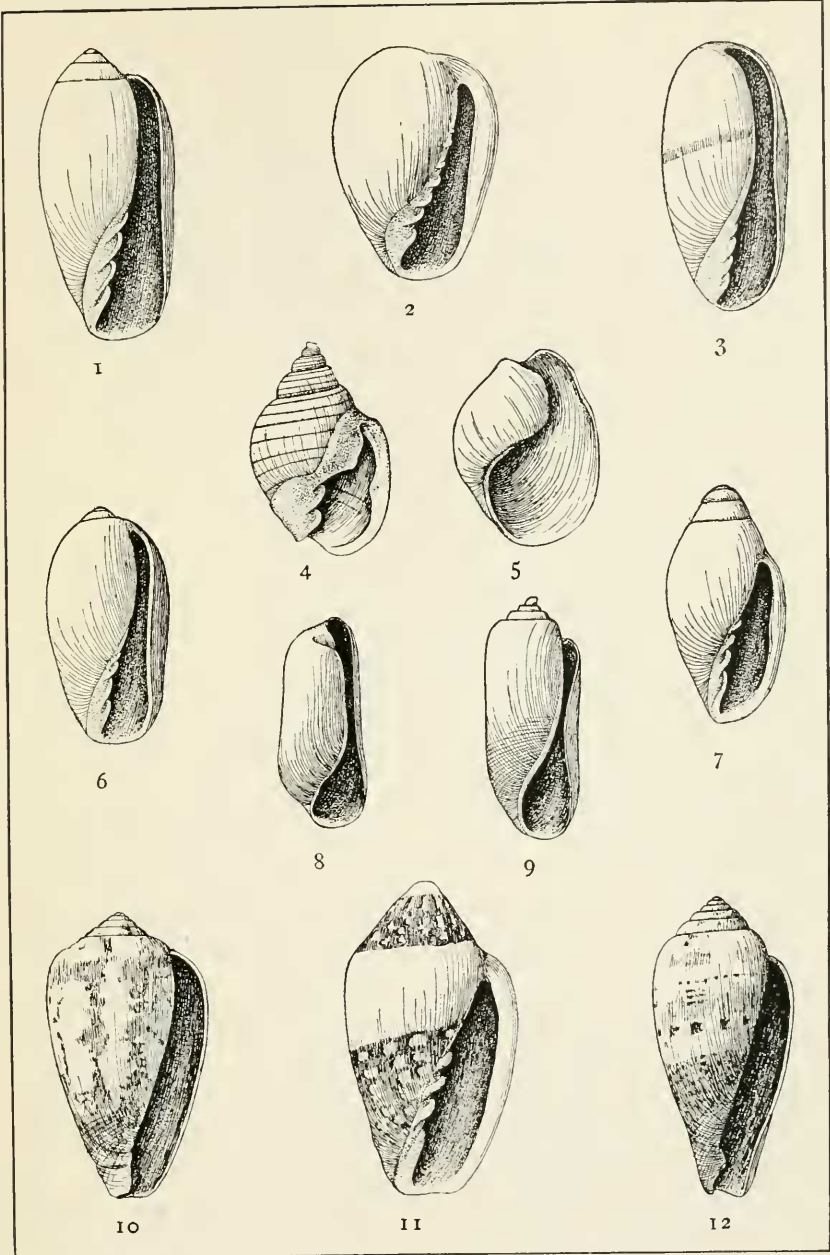
## PLATE 53.

- FIG. 1. *Rochefortia farma*, new species, p. 201.  
 2. *Rochefortia farma*, new species, p. 201.  
 3. *Lasea turtoni*, new species, p. 201.  
 4. *Lasea turtoni*, new species, p. 201.  
 5. *Rochefortia io*, new species, p. 201.  
 6. *Rochefortia io*, new species, p. 201.  
 7. *Felaniella alfredensis*, new species, p. 195.  
 8. *Felaniella alfredensis*, new species, p. 195.  
 9. *Diplodonta africana*, new species, p. 195.  
 10. *Diplodonta africana*, new species, p. 195.

## PLATE 54.

- FIG. 1. *Ungulina alfredensis*, new species, p. 196.  
 2. *Diplodonta almo*, new species, p. 195.  
 3. *Carditopsis alfredensis*, new species, p. 193.  
 4. *Carditopsis alfredensis*, new species, p. 193.  
 5. *Venericardia africana*, new species, p. 192.  
 6. *Venericardia africana*, new species, p. 192.  
 7. *Condylocardia io*, new species, p. 193.  
 8. *Condylocardia io*, new species, p. 193.  
 9. *Digitaria africana*, new species, p. 194.  
 10. *Ungulina alfredensis*, new species, p. 196.



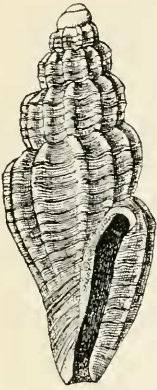


SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 257.







1



2



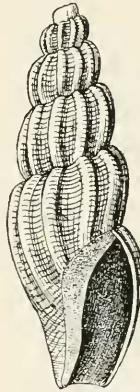
3



4



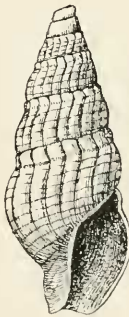
5



6



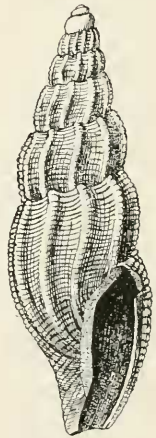
7



8



9



10

SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 257.





1



2



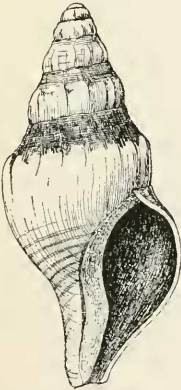
3



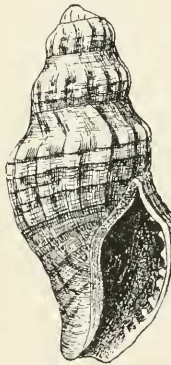
4



5



6



7



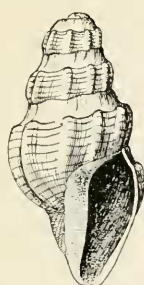
8

SOUTH AFRICAN MARINE MOLLUSKS.

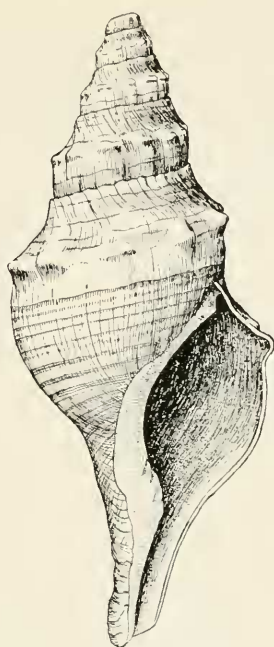
FOR EXPLANATION OF PLATE SEE PAGE 257.







1



3



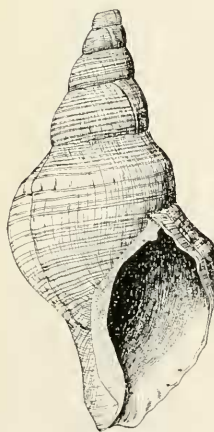
2



3 a



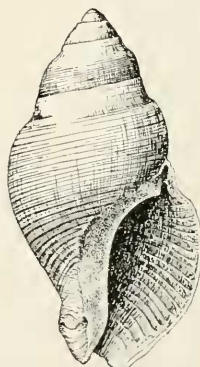
3 b



4



5

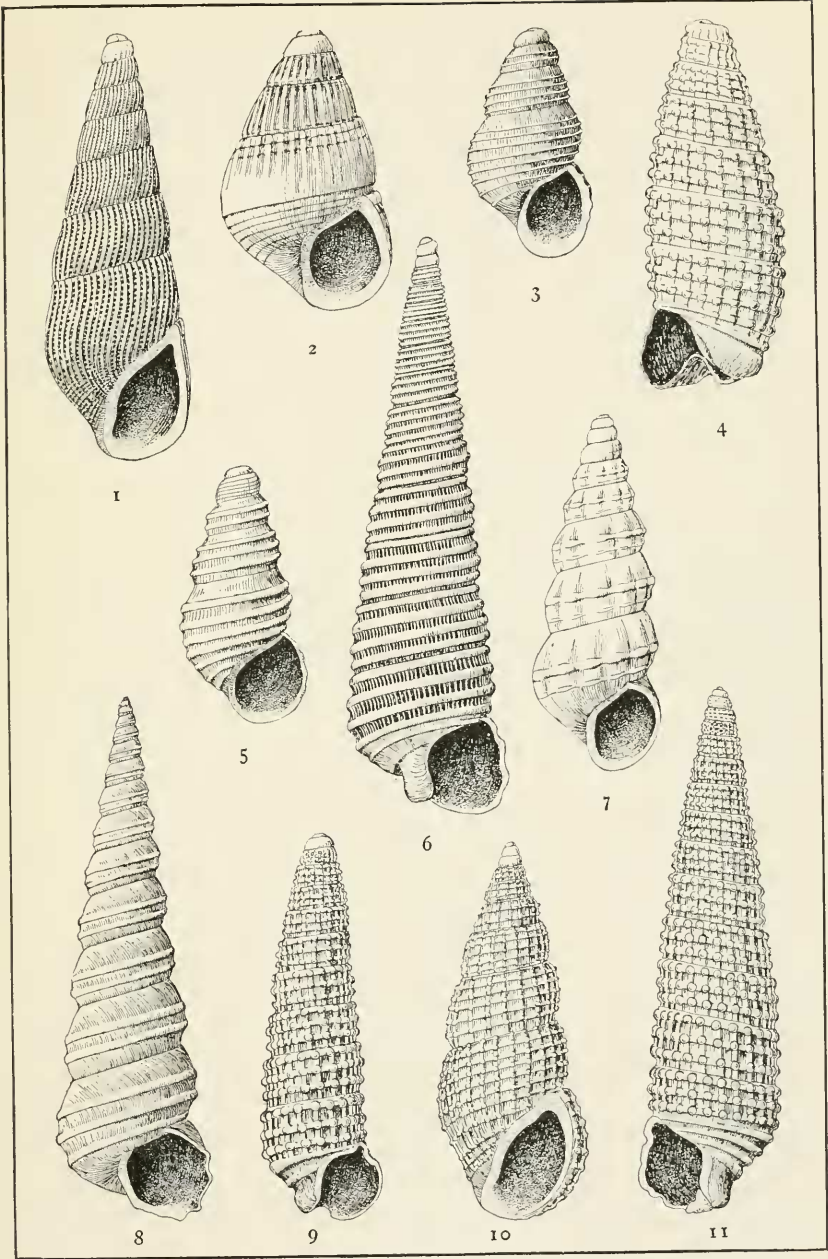


6

SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 257.

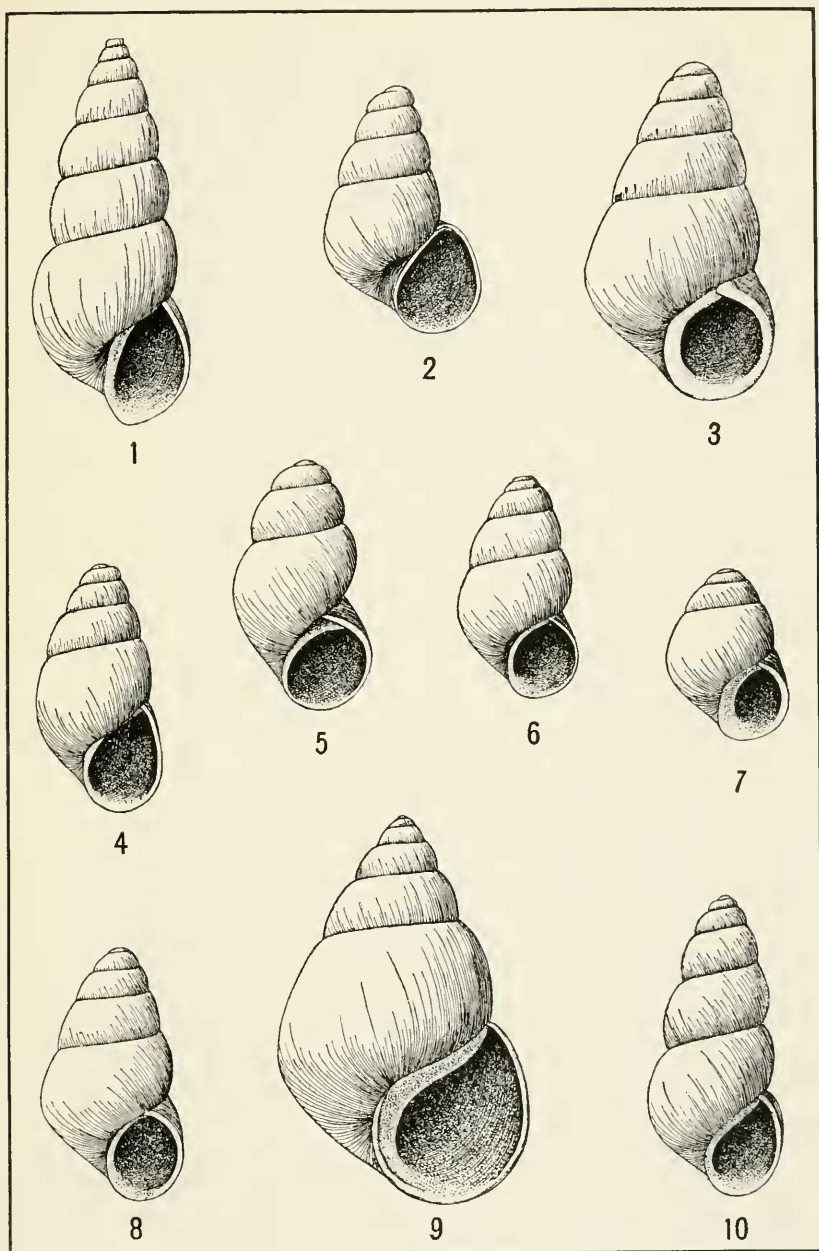




SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 258.





SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 258.







1



2



3



4



5



6



7



8

SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 258.





1



2



3



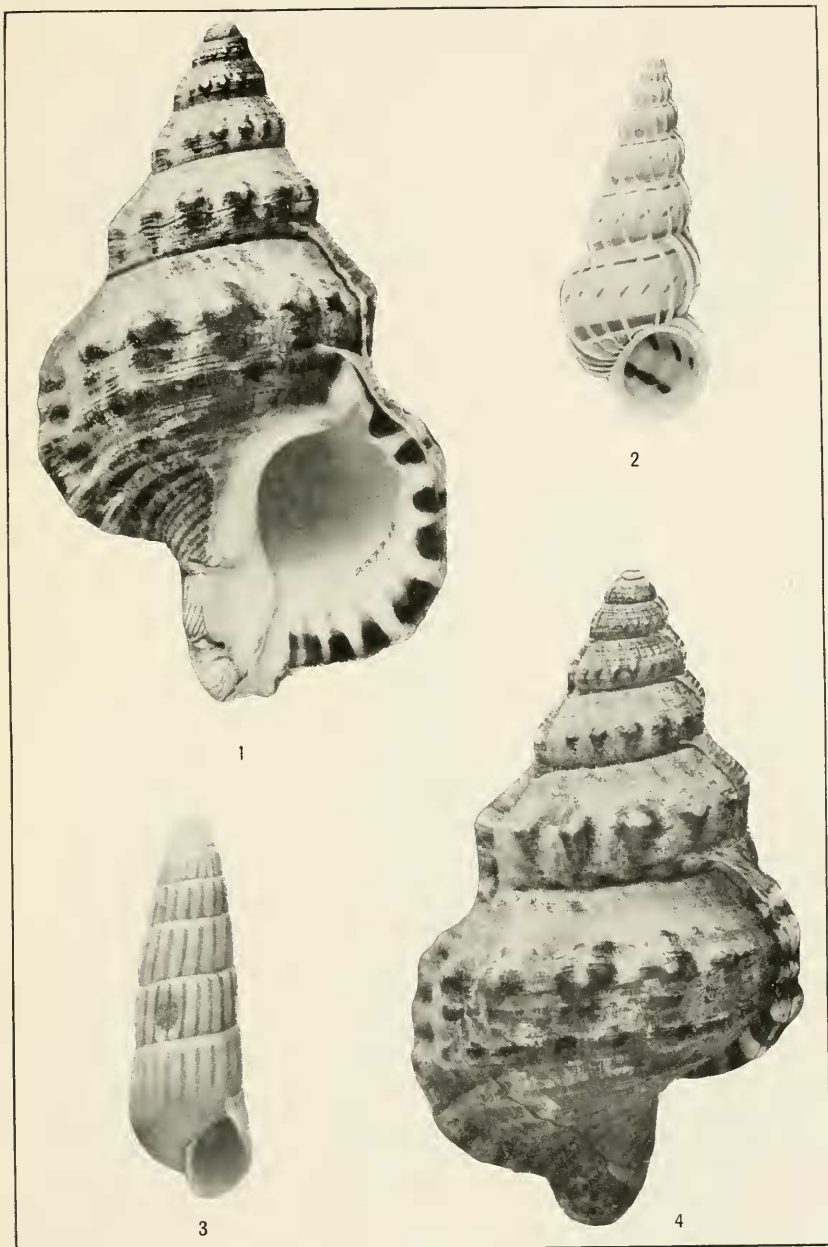
4

SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 258.



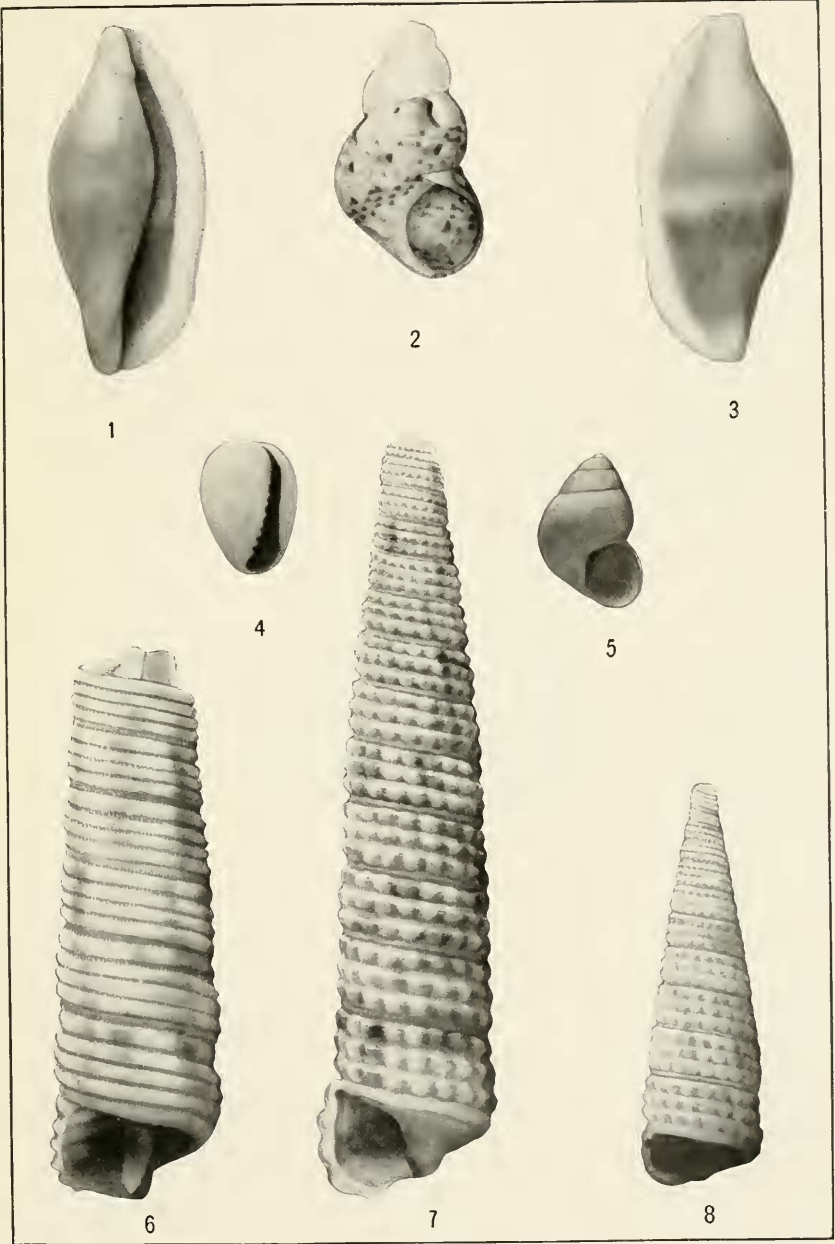




SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 258.

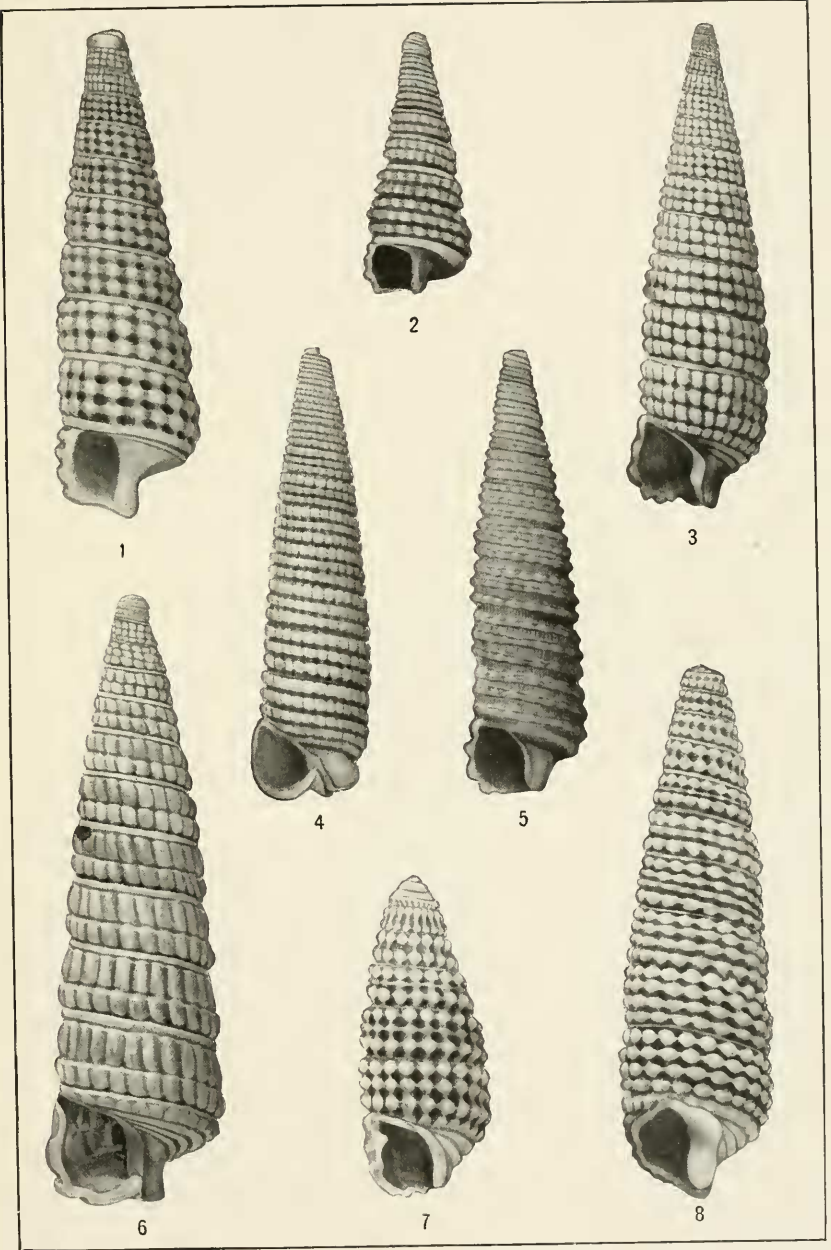




SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGES 258 AND 259.



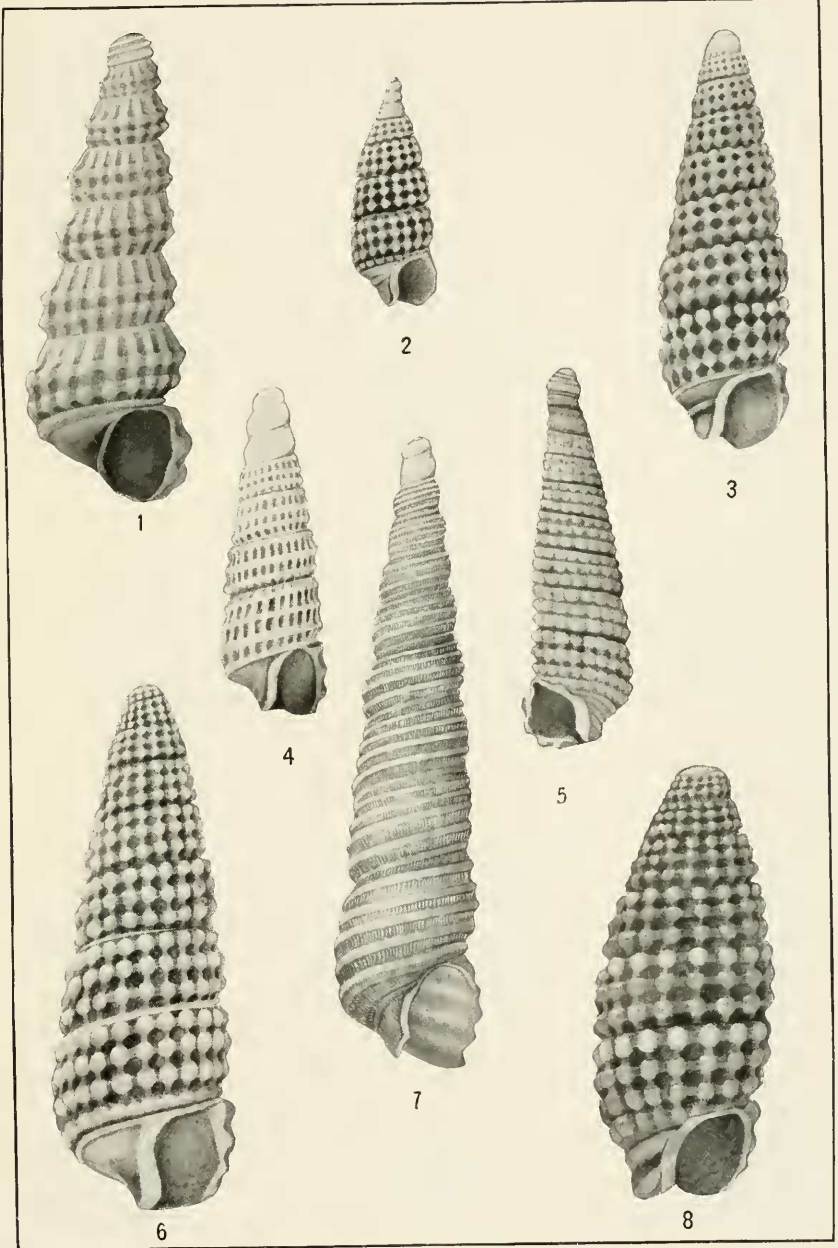


SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 259.



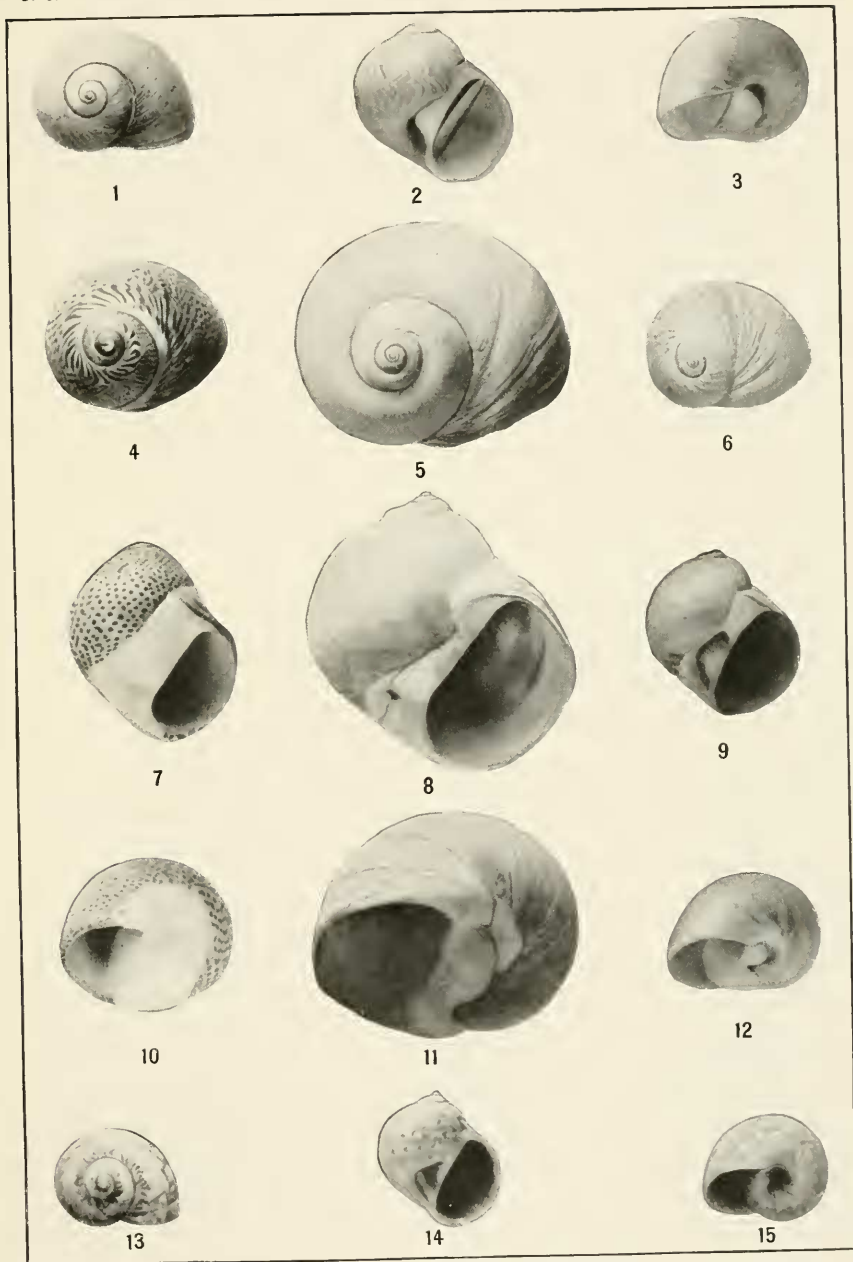




SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 259.



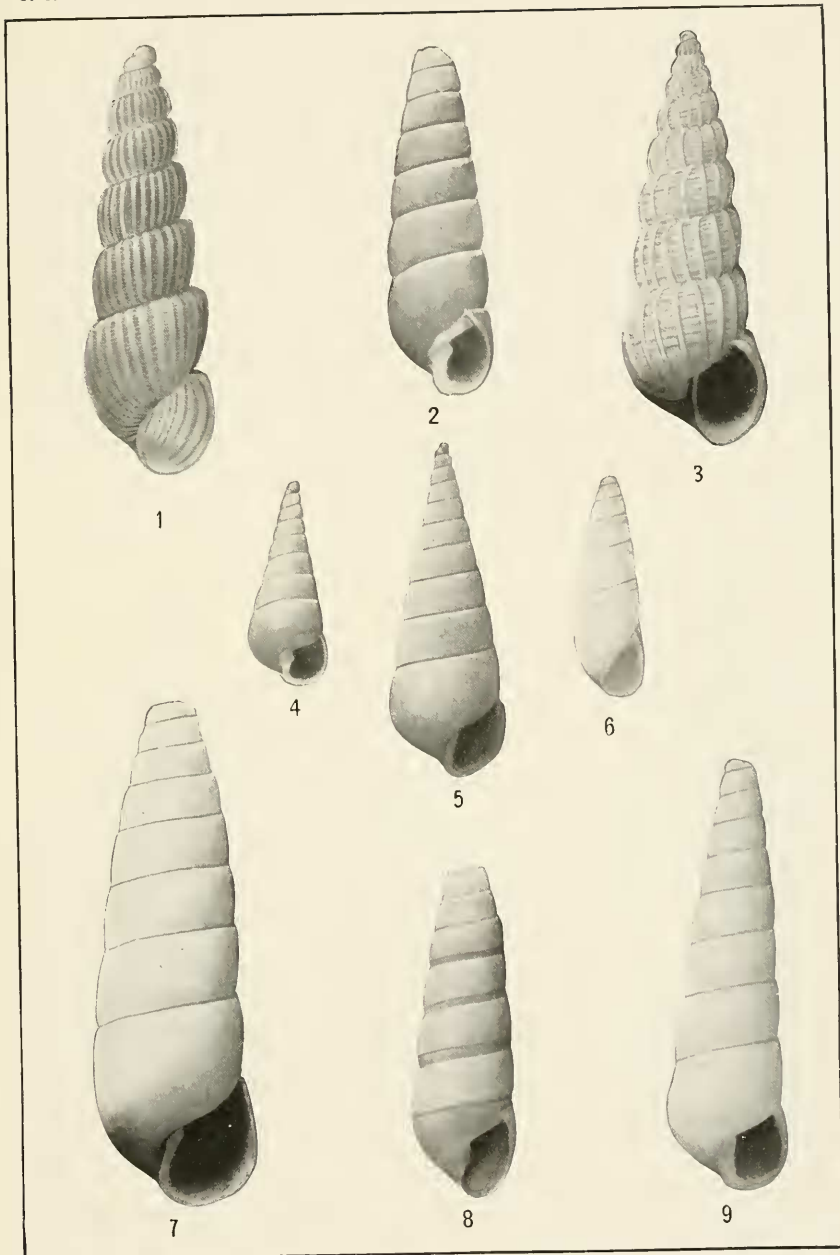


SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 259.







SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 259.





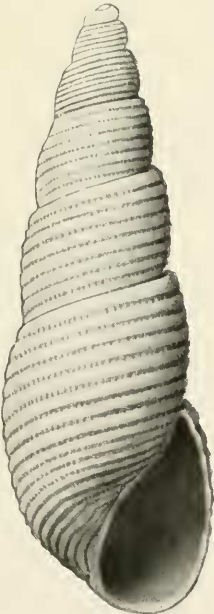
1



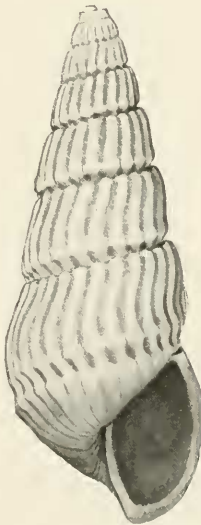
2



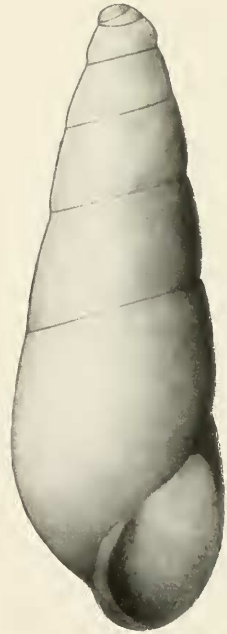
3



4



5

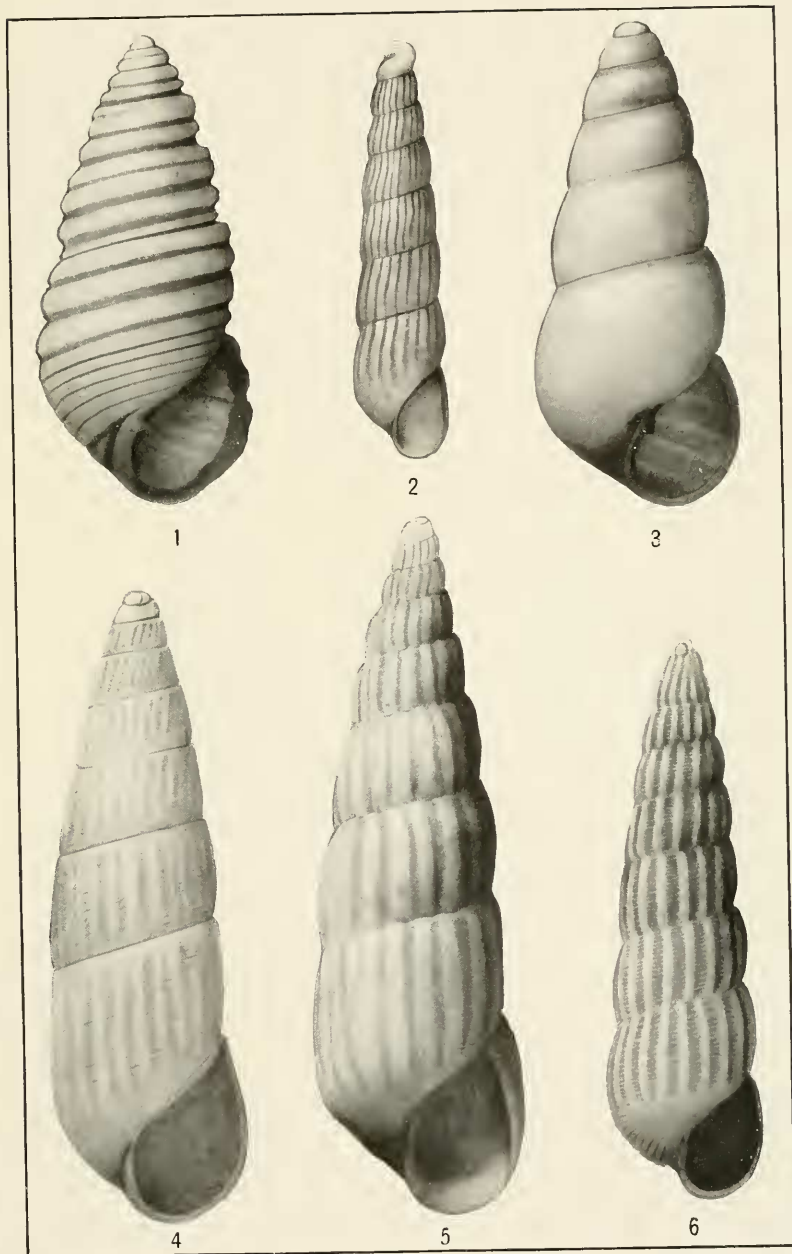


6

SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 260.



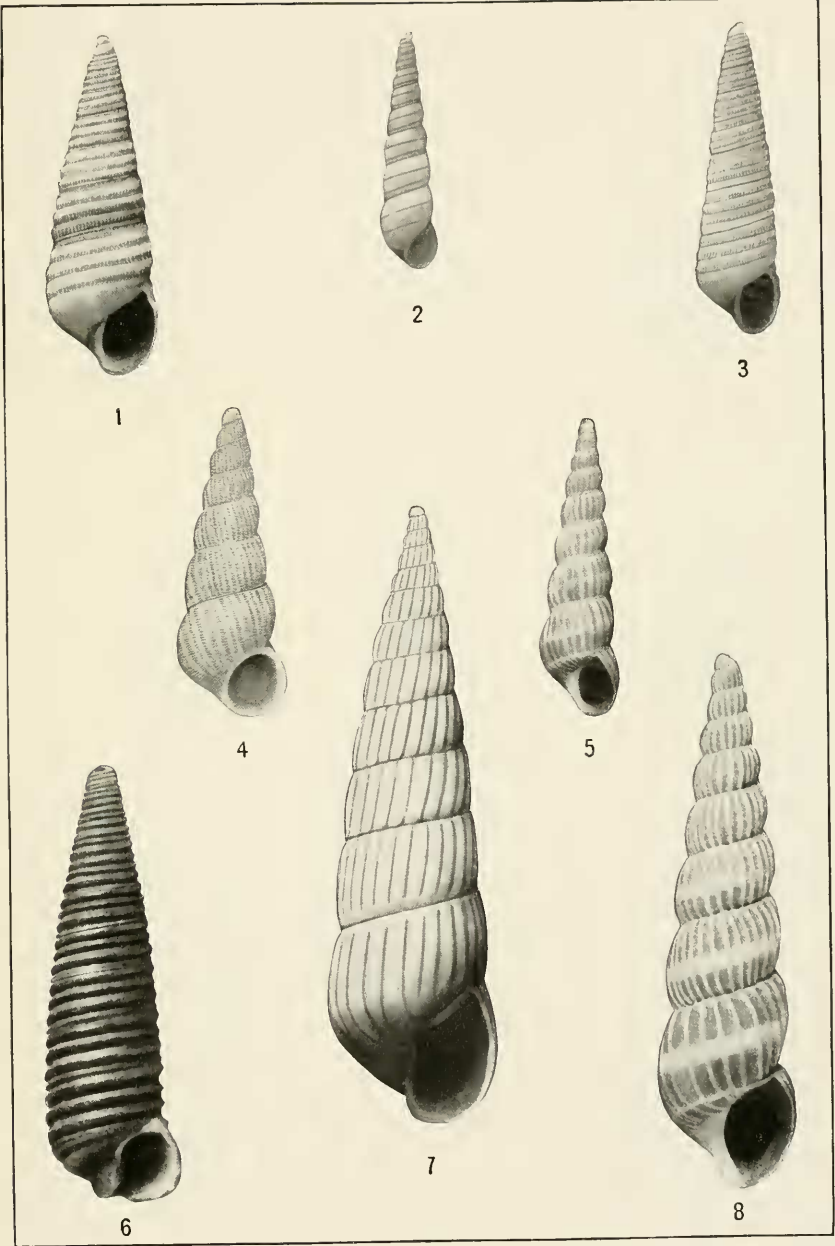


SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 260.



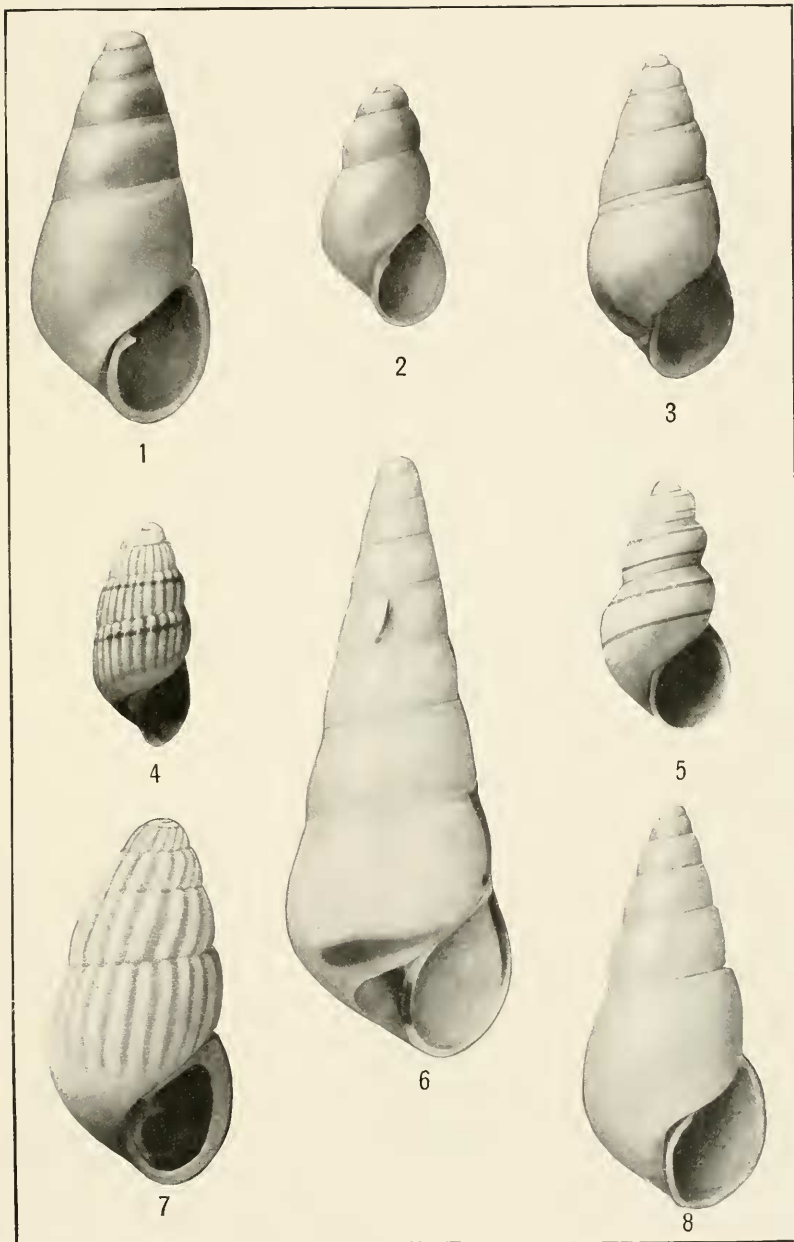




SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 260.



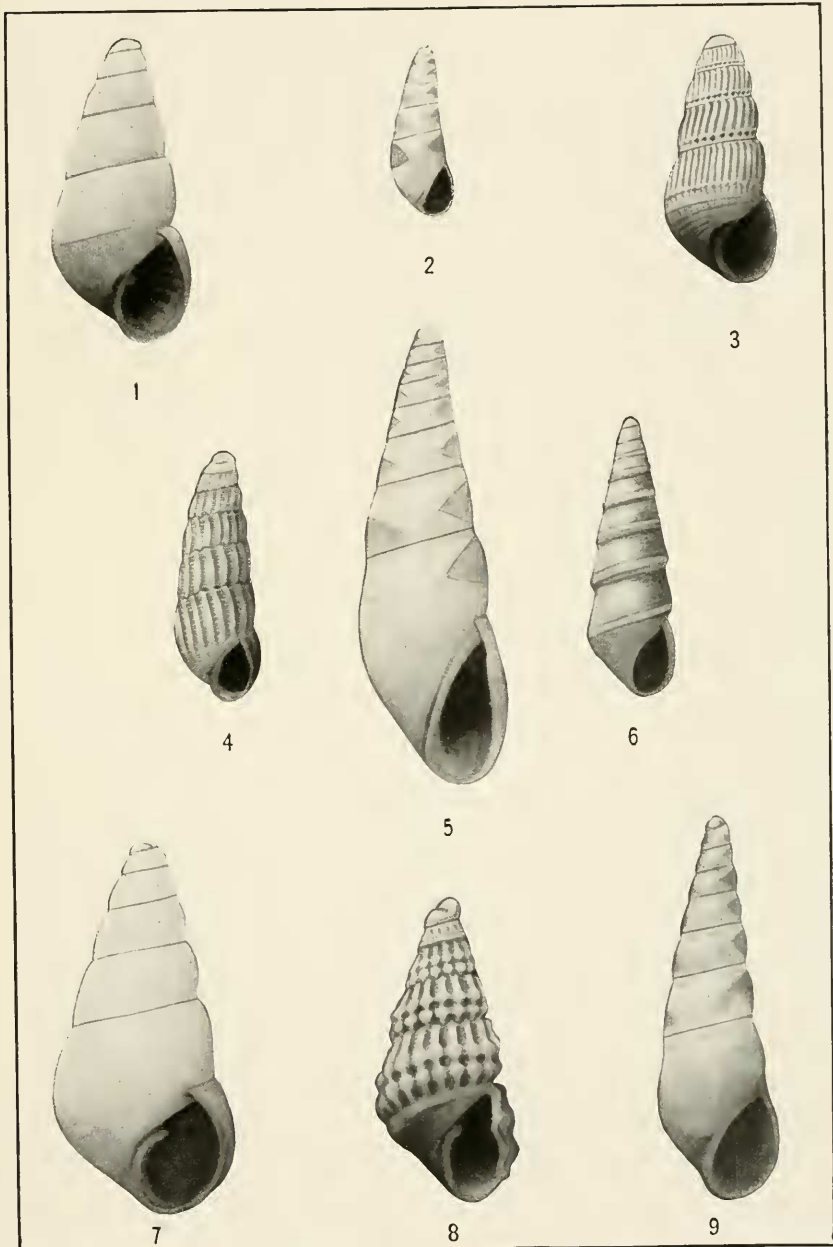


SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 260.







SOUTH AFRICAN MARINE MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 260.